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HYGEIA

A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH

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535 N. Dearborn St., Chicago

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A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH

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VOLUME 3 JANUARY, 1925 NUMBER 1

THE CONTRIBUTORS' COLUMN

DR. MAX SEHAM practices medicine in a middle-western city. DR FRANCES SAGE BRADLEY knows the problems of rural health; her new series on "The Honest-to-Goodness American Child" is a plea for the country boy and girl. EDWARD C. DELAPORTE is assistant supervisor of physical education of the Chicago school system.

Harvard medical school arranges each year a series of free public lectures on scientific subjects. Through these lectures faculty members give the public the latest scientific facts. "Successes and Failures of Surgery" by DR. DAVID CHEEVER contains the essentials of one of these lectures. BERENICE LOWE is a free lance writer.

RUTH LEHMAN, a regular contributor to HYGEIA, is connected with the home economics department, college of education, University of Chicago. She is a specialist on menus. DR. JOHN DAYHUFF ELLIS is a physician especially interested in the health problems of industry.

DR. DOUGLAS A. THOM writes again of the Boston habit clinics, which concern themselves with the mental problems of the preschool child. CHI-CHEN WANG, a Chinese student, studies journalism and economics at one of our universities.

As assistant surgeon general of the U. S. Public Health Service and in other similar capacities, H. R. CARTER has served the government for almost fifty years.

ANIMALS FOR SCIENTIFIC RESEARCH

Increased activity on the part of those who oppose vaccination and also oppose the use of animals for the advancement of knowledge in medicine and in other scientific lines has become apparent during the last few weeks. Judging from previous experience this activity forecasts efforts to secure, during the coming sessions of the legislatures, the enactment of laws restricting or prohibiting the use of animals for such purposes.

Unfortunately few of those who are active in this movement have accurate first-hand knowledge of the manner in which animals are used and fewer still adhere strictly to the truth in their statements.

Ernest Harold Baynes, the naturalist, a lifelong student and friend of animals, wrote for the October, 1923, issue of HYGEIA an article entitled "Which Shall Live—Men or Animals?"

Mr. Baynes has recently written a more extended account of his experiences with some of the organizations as well as fanatical individuals who lead the opposition. His story will appear in February and succeeding issues of HYGEIA.

Contributions to HYGEIA *are considered, and, if accepted, paid for. Stamps for the return of unaccepted manuscripts should be enclosed. All communications should be addressed to* HYGEIA, *535 North Dearborn Street, Chicago, Illinois.*

CONTENTS

COVER—FULL OF FRESH AIR
Poster by Marian Husted, Cleveland, awarded honorable mention in HYGEIA *poster contest.* PAGE

FRONTISPIECE—HYGEIA AND AESCULAPIUS 2
Bas-relief by Thorwaldsen. Courtesy of Dr. William A. Kristensen

WARNING SIGNALS OF FATIGUE 3
Max Seham

THE HONEST-TO-GOODNESS AMERICAN CHILD 6
Frances Sage Bradley

ICE SKATING—KING OF WINTER SPORTS 8
Edward C. Delaporte

"THE BEST THING I EVER DID FOR MY HEALTH" ... 9
Prize Letter Contest

SUCCESSES AND FAILURES OF SURGERY 13
David Cheever

THE SCARE PUNISHMENT 15
Berenice Lowe

EXPLOITING THE HEALTH INTEREST (FOOD FADS) .. 16

FERRY BOAT SCHOOLS 22

BOX LUNCHES FOR SCHOOL CHILDREN 23
Ruth Lehman

KEEPING EMPLOYEES IN GOOD HEALTH 25
John D. Ellis

MENTAL HANDICAPS OF CHILDHOOD—PART II 29
Douglas A. Thom

AN EXHIBIT OF HEALTH POSTERS SUBMITTED IN HYGEIA CONTEST 31

PATENT MEDICINE IN CHINA 35
Chi-Chen Wang

PROTECTING THE UNITED STATES FROM DISEASE—PART I 39
H. R. Carter

FOSTER PARENTS FOR HOMELESS CHILDREN 43

PLAIN FACTS ABOUT HEALTH AND DISEASE:
The New Year 44
Health News of the Month 44
Whooping Cough 45
The Cockroach 46
Comfort Stations 46
Colds 47
The Motorist and the Child 47

ONE NIGHT IN JINNIE'S KITCHEN 48
Ruth Strang

IN THE LAND OF THE PYRAMIDS 50

BOUND FOR A BATH IN HEALTHY LAND 51
John T. Lemos

HEALTHFUL BEAUTY 52

HEALTH NEWS AND VIEWS 53

QUESTIONS AND ANSWERS 58

CURRENT HEALTH ITEMS 62

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HYGEIA AND AESCULAPIUS

From a bas-relief in Thorwaldsen Museum, Copenhagen, by Berthel Thorwaldsen, 1770-1844. Hygeia, the goddess of health, is attending the sacred snake of Aesculapius of Epidamnos. Recent excavations at Epidamnos (now Durazzo, Albania) have brought forth sculptures representing the same subject. These are in the national archeological museum in Athens. Epidamnos, from 700 to 600 B. C., was a great center of healing and possessed a large temple to the worship of Aesculapius. Snake worship was not confined to the Greeks; the Hebrews, Babylonians and early Persians practiced it as well.

Warning Signals of Fatigue

MAX SEHAM

ELSIE opened her eyes with an effort and closed them again immediately. She was tired, too tired to get up. What a frightful dream she had had! A gigantic "Five" had kept pressing down on her chest, harder and harder until she thought she would suffocate. And her mother had kept repeating: "When you have done your arithmetic, you will be an educated girl."

Her mother was now calling her again, urging her to get up and make ready for school. How she wished she could stay in bed!

Finally she arose and, with a pathetic gesture, began to dress. She dressed slowly. Why should she hurry? If she had plenty of time, her mother would insist that she eat breakfast. She would rather be late to school than be forced to eat. She was never hungry for breakfast.

She did take one bite of toast, though, before she left the house. Her legs and back ached, as she walked to school, and the buzzing in her ears made her dizzy. Funny, she never used to know she had a body! Now, because of the pains in her back and legs, she was conscious of it all the time.

Tired Person Is Conscious of Body

Elsie was a tired child. Like Elsie, every other tired child becomes conscious of his body. He dreads to perform the functions that are required in daily activity, because tiredness so reduces the efficiency that the simplest things become difficult. The tired person cannot accommodate himself adequately to the ordinary task, nor is he equal to exertion without painful sensations.

Good vitality means the possession of a reserve fund beyond that which is immediately needed. The smaller this reserve, the less prepared is the child to meet exigencies with ease and to stand the usual wear and tear of daily life without serious injury. A healthy child laughs, runs, romps and acts spontaneously. The tired child has to be urged and coaxed to do what healthy children do naturally; he is conscious of the fact that he must exert himself, and the more he does this, the more tired he becomes.

All of us are familiar with the nature of fatigue. In carrying a heavy bundle, we are not aware of its weight for the first few minutes. Soon we begin to transfer it from one arm to the other, and finally we have to give our arms a rest because they feel stiff and painful. The longer we carry the package, the more time we have to allow for rest and recovery. The muscles of the arm and shoulder cannot work indefinitely, and there comes a moment when the pain in the muscles becomes so severe that we simply have to stop.

We can get the same sensations by trying the following experiment: Extend the arm horizontally and endeavor to hold it straight. We succeed in doing so for a few minutes. Then the arm begins to feel heavy and numb. However, we do not give up, but summon our will power and persist for two more minutes. After this time we find it practically impossible to hold up the arm any longer. At first our will power aided us in overcoming the sensation of fatigue; but it failed when weariness advanced into real fatigue.

Our brain then registers the sensation of weariness before we reach the state of complete exhaustion. The animals of the field before a storm seek shelter when the first lightning cuts the sky. They are in safety before the rain can drench them. So the sensation of weariness acts as a sort of lightning, warning the brain that the body is in danger of fatigue.

This feeling of weariness disappears after rest or change of work. If we are weary from studying some dry, technical subject, a thrilling detective story seems to drive away dulness. The change of work does not really eliminate fatigue, but it makes us forget the warning signal by introducing an interest that holds our attention more effectively.

What Happens to the Body in Fatigue?

Let us accompany a muscle on its journey toward fatigue. One would naturally suppose that a muscle can work only as a part of the body, but, as a matter of fact, a muscle can be isolated from the body and made to work by artificial stimulation. The muscle will respond

to electric current by contractions. But even in the isolated state, there comes a time when the muscle refuses to respond any further. It has reached the state of exhaustion, the final stage of fatigue.

During muscular work, chemical changes occur. Certain substances are formed which depress or inhibit the power of contraction. To this group of poisonous substances belong carbon dioxid, the gas which gives the "fizz" to ice cream sodas; lactic acid, the acid in sour milk; and acid phosphates, the active agent of many laxatives.

These "fatigue substances" interfere with the normal function of the organs and tissues into which they are swept by the blood stream. During work, they accumulate in the blood faster than the lungs, skin and kidneys can eliminate them. They have the same effect on the function of an internal organ as a cinder in the eye has on the sight. During rest, the body gets a chance to eliminate the poisons more completely and the amount of the poison present determines the length of time necessary for elimination and recovery.

Through overwork and insufficient rest periods for elimination of the waste products, the fatigue which at first is only temporary becomes permanent and chronic.

Can't Separate Physical and Mental Fatigue

After we have taken a long hike, our only wish on arriving home is to rest. We do not feel like talking; our tongue seems just as tired as our legs. We even do not care to read because our eyes feel so heavy. Our tiredness is general.

After hours of mental work at a desk, we not only have a dulness in our head but our whole body aches. Again, fatigue is general, though in this instance it is brought on by mental effort.

These two examples show that whatever the source of fatigue, physical overexertion or excessive mental activity, the fatigue resulting involves both the body and mind.

In order to understand the answer to this question, a short description of the working of the nervous system will be of help.

The headquarters of the nervous system is the brain. It supervises all activity of the mind and body, directing and receiving all messages. A canal runs through our spine, which houses great bundles of nerves, the spinal cord. From this spinal cord branch off the spinal nerves, serving as roads for all messages of touch, heat, cold and other human sensations. They are the sensory nerves. The outgoing, or motor, nerves communicate with the muscles through the little plates which are attached to the tiny fibers of the muscles. These motor plates, through their respective nerves, receive orders from the brain and transmit them to the muscles for action.

Let us see how the nervous system works in daily life. For instance, if we touch a hot stove with our fingers, we automatically withdraw the finger. This spontaneous action of the finger is called a reflex. What actually happens is this:

The sensory nerve endings in the tip of the finger receive the first impression of heat and communicate it through the sensory nerves to the brain. The brain then sends orders by way of the motor nerves to the motor-end plates to tell the muscle of the finger to withdraw the finger. So we find that the parts of the body that participate in muscular activity are the brain, the nerves and the muscles.

Brain Tires First

Which of these tools is most susceptible to fatigue—the brain, the nerves or the muscles?

We will compare first the fatigability of the brain with that of the muscles. Suppose we are asked to lift a weight with the finger as many times as we possibly can. We stop after ten lifts. Why? Because our brain orders us to. This means fatigue of the central nervous system. But how about the muscle of the finger? Is the muscle also exhausted? If so, nothing should be able to make it contract again, because fatigue of the muscle means loss of the power to contract. But this same muscle will contract if stimulated by an electric current.

Hence, we find that in muscular work, the brain tires first and the muscles next.

We may ask the question—doesn't the tired muscle refuse to contract because the motor nerves are tired and therefore do not furnish it with energy as they otherwise would do? Experiments have shown that the nerve retains its activity long after the muscle is so tired that it does not even respond any more to artificial stimulation. This proves that the nerve is less susceptible to fatigue than the muscle.

Such is the way fatigue affects the human organism. It leaves its imprint first on the brain, second on the muscles and third on the nerves.

Now we understand the process that went on in Elsie's body. Is there no way by which her mother could have told that Elsie was a tired child?

Symptoms and Signs of Fatigue

Chronic fatigue does not manifest itself overnight. It is a condition that comes on slowly, and therefore in the beginning does not appear as dangerous as it really is. Like every disease, it is preceded and accompanied by warning signals which give notice of approaching danger. These signals are sent forth by the human body in its desire for protection from further damage. Unfortunately they are often ignored by the mothers and teachers as well as by the child.

What are these warning signals? Let us recall the impression of the audience we received the last time we attended a lecture that lasted until late at night. Some one started the cough that brought out an echo from practically every throat. Yawning proved to be of equally infectious nature. Our neighbor seemed to give the sign for everybody to fold and crush the program. Somehow, he could not make up his mind whether the right leg felt better over the left or the left over the right. Nor could he keep his hands at rest. So while one hand folded the program, the other fumbled with the watch chain. And the woman at our left divided her attention between her chain of beads and her eyeglasses which she seemed unable to wipe clean. We also felt tired, and we became suddenly aware of an uncomfortable pressure on our knees from the seat in front. We wished the illumination of the hall were more subdued and we closed our eyes for relief.

All these observations that we made are symptoms of fatigue.

Fatigue Symptoms in Schoolroom

If we visit a schoolroom toward the end of the afternoon session, we will observe the same symptoms. We find that our Johnny is ignorant of our presence, is not paying attention to his teacher; instead his eyes wander from Mary's desk to the window and back to Mary's desk again. Mary seems to be interested in the book on Johnny's desk. We wonder why she makes so many unnecessary movements. Johnny is chewing his pencil. And Johnny, of whose straight carriage we are so proud, sits slouching in his seat. The other children, too, seem inattentive and restless.

The teacher may tell us that toward the end of a school day the children have difficulty in concentrating, that their writing becomes rather careless and that their speed of work diminishes, while the number of mistakes increases. Tests for mental work given at that hour show that the capacity for work is actually decreased.

These are some of the symptoms of fatigue that occur at the end of a day's work. They are also present in cumulative chronic fatigue. In the latter condition, however, they appear earlier in the day.

It is difficult to give a concise picture of the signs and symptoms of cumulative fatigue, because they vary in number and severity depending on the type of child, the state of his health and the underlying causes. They may be different in an older child than in a young child, different in a boy than in a girl. They are subject, also, to racial influences. Even in one and the same child they will vary at different times of the day, since activity and the intake of food necessarily have an effect on fatigue.

Can Detect Warning Signs

But there are some outstanding symptoms in the course of fatigue that every mother and every teacher can detect once interest in fatigue has been aroused. If we have under our care a child that up to the age of twelve years has been normal, healthy, well behaved and a good scholar, and for the last six months has been irritable, inattentive, hard to handle, we should suspect fatigue. We should not call a child "queer" because the muscles of his face twitch, because he blinks his eyes and snuffles; he probably suffers from fatigue. Nor should we punish a child for laziness because he won't get up in the morning, dislikes to go to school and does not like to run around like other children. He too may be suffering from fatigue.

We have not done all in our power to relieve the headaches of a child by having his eyes fitted with glasses. Many children have been fitted with eyeglasses by some one who treated only the eye and not the whole child. Their eyesight may have been perfect, and their headaches due to fatigue. If a child looks weary and pinched and has dark circles under the eyes, gets dizzy and faints, does not eat well and can't sleep at night, we should not feed him tonics. His symptoms may be due to fatigue.

All these signs and symptoms are signals of a decrease in mental and physical efficiency.

The Honest-to-Goodness American Child

FRANCES SAGE BRADLEY

I

A COUNTRYMAN visiting the east side of New York, the west side of Chicago, or the tenement district of any of our great cities, might feel that all the children in the world are herded there. He would thank God that his children are spared the confusion, congestion, and the temptations of the slums.

Likewise the city man, after a few days or weeks in the country, would be overwhelmed by its isolation and lack of human relationships; by its inconveniences and lack of opportunities for the best development of his children. He would return to the city, grateful to escape the penalties of rural life.

Both men are right, and both wrong. Neither knows what is happening to the child of the other, and neither concerns himself to find out if in the great game of life this silent partner is having a square deal.

City Baby Is Community Problem

In cities the baby often is unpopular except in the homes of the poor. This banishment to the slums makes it possible to study him there *en masse*. He has become no longer a family but a community problem and, as a result of persistent, intelligent, organized effort, conditions affecting his welfare are coming well under control. His mother is supervised before, during and after his birth, and as a result she stands more than twice as good a chance of life as the rural mother who receives no such supervision. The baby's chances of living to be a month old are four times as good as those of the rural baby, whose mother receives no such care.

According to Metropolitan Life Insurance Company figures, had the babies under one year of age dying in New York City in 1921 been laid shoulder to shoulder, the line would have reached Irvington on the Hudson, while a similar line in 1922 would barely have reached 138th Street. A steady decline in infant mortality is needed over the period of the next twenty years.

No such efforts have been made to save the rural baby and his mother, yet according to the census bureau, the swarms of children hiving in cities represent less than half of America's coming citizens. Three fifths of our 30,000,000 children are born up in the rugged mountains that girt our shores; out on the endless plains; down in the swamps and deltas of our great water courses, cut off by obstacles mechanical, social, economic, from those sources of relief that are freely available to the child of the city.

Coming citizens in their mountain home

Let us recognize the fact that the honest-to-goodness American child is a country child and that his name is legion; that his coming and going are largely a matter of chance and tradition, though upon his integrity depends the integrity of our nation. It is believed that the knowledge and skill acquired in the laboratory of the city, if applied to the needs of this silent citizen, will produce a nation the like of which the world has never seen.

II

A MOUNTAINEER was found sitting on a log in front of his cabin, preparing to set the broken arm of his little nine year old daughter. Quiet but with great tears rolling down her cheeks, the child stood between his knees and waited.

In reply to a remonstrance, he changed his quid to the other cheek and explained, "Wall, lady, the nighest doctor lives forty mounting miles from hyar, an' ter tell the truth, I haint hed much luck with doctors. Yer see," he added, pointing to the reversed position of one hand, "what happened when a medical student tried ter patch up Ruby's fust break. She want nothin' but a knee baby then, an' thet boy tol' me her arm 'd straighten out in time. Hit 's been seven y'ar come nex' fodderin' time, an' ter look at thet chile's han' nobody could tell whether she air a comin' or goin'.

"T'other arm air wusser 'n thet," he added. "In them days I thought like you thet I ought ter hev a doctor, an' the only one in these parts war ole "Still Bill," or "Injun Bill" some of 'em calls him. He's a Cherokee medicine man an' the women folks lays a lot a sto' by him ef they kin ketch him sober. At the time we wanted him, o' co's he hed ter be in jail fer kickin' up a rumpus on 'lection day, but I paid him out an' brung him on home. This air some o' his work," drawing up Ruby's sleeve and exposing a stiff member with rigid, distorted elbow. "The chile air plumb ruint, an' while I haint much on surgerin', I sw'ar I caint do much wusser 'n the doctors hev done," and with vigor and precision he spat beyond the stump.

Splitting two shingles and sawing them of an equal length, he proceeded to pad them with soft white wool, and continued: "She seemed a hearty little critter, but her bones must a been powerful soft. The fust time hit happened, she fell offen the back do' step, an' her arm snapped like a pipe stem. I reckon she'll cyar hit backside fo'most the longest day she lives. The nex' time, she clum a tree fer a oriole's nes' a hangin' from a limb. O'co'se she fell, with jes on han' fer climbin', an' when thet Injun doctor got through with her the po' little thing did n't hev no arm fitten fer nothin'. Sence then we hez ter feed her an' dress her an' she haint no good ter her mommy in the kitchen nor ter me in the fiel'. Don't talk ter me lady about yer doctors," he added bitterly.

Stripping up an old sheet for bandages, he said almost to himself: "O' co'se I mout a been ter blame fer this. Leastways, I ought ter a kep' a eye on the chile. Yer see my boys air all gals. Ruby hyar, hez allus been plumb foolish erbout her poppy, while I—wall, she hez been so onlucky, I craves ter keep her allus in sight. O' co'se she air clumsy, with no free han' ter pertect herself, but she hez allus been ez sure footed ez a young heifer, an' she trails aroun' arter me like a little houn' pup.

"Yesterday Po an' Lum Coggins war a holpin' me snake logs down the mounting ter shape up fer ties. I knowed in reason, Ruby war thar, an' the trail war slippery with wet leaves an' pine needles, but the fust we knowed, thar war Ruby a sprawlin' an' slidin' down yan side o' the gulch, with ole Tuckasegee a roarin' an' foamin' at the bottom. We started on a run but at the rate she war a goin' we knowed nothin' but Gawd A'mighty could save her, an' He done hit.

"Ruby war game all right. She gritted her teeth an' fit an' clawed an' re'ched with her stiff arm an' her back handed arm at ever'thing in her way, till at last, scratched an' bleedin' from the ragged rocks an' roots, she hove up a straddle o' thet dogwood tree, side o' the laurel patch. An' thar we ketched her.

Although the last frontier has vanished, many babies are being born and reared under pioneer conditions. This baby lives out on the plains in a county of 5,500 square miles. There is not a telephone in the county, the nearest neighbor is 40 miles distant and the nearest doctor, 100 miles away.

"When we got her home an' cut off the rags, fer her dress war plumb to' offen her, hyar war the fust arm broke ergin an' a piece o' bone stickin' through the meat. Her mommy air a mighty good doctor woman. She stretched her arm till the bone went back under the skin, rubbed her off good with turpentime an' wropped her in soft ole rags drenched in alum root tea. This air powerful good ter stop bleedin' an' hit keeps down the soreness an' swellin'. But the child didn't sleep none las' night an' nuther did her mommy nor me. We air plum' wo' out, an' this arm hez jes natu'ally got ter be sot this mawnin'." He arranged splints, bandages and a basin of alum root tea on a log.

"All right, Ruby, little gal," and a jeans coated arm went round the shoulders of the weeping child. "Min', you air poppy's grown woman, but I wants ter state thet I sho am proud yer haint got but two arms."

This is but one of the many Rubies to whom such things are happening every day. You may say that she pays the price of a dumb father for locating off in the remote mountains. But of what value is a free country if a man may not choose the quiet, wholesome heights in which to rear his family, instead of the noisy congestion of the crowded city? And how may we be sure that his children will make any less valuable citizens of state and country if given their share of service and protection during the early years of dependency?

[*This series will be continued in the February issue of HYGEIA.*]

Ice Skating—King of Winter Sports

EDWARD C. DELAPORTE

PERSONS who live in large cities are particularly prone to neglect their exercise during the winter months. Therefore, for the past twenty years public recreation authorities have been much concerned with the problem of outdoor recreation for all classes, particularly during the winter season.

Young people do not need much encouragement to partake of exercise. The spirit of play and action is an inherited instinct since exercise is necessary for proper growth. After maturity, exercise is essential in order to keep physically fit; this holds true especially for the sedentary person. Systematic exercise is important and beneficial, but exercise to which one is attracted naturally will accomplish the most good.

The value of exercise is in attaining physical poise, a well rounded physical development, coordination of the various parts of the body and increased and proper activity of the cell tissues and vital organs, resulting in the elimination of the waste products. It is not necessary to accomplish great athletic feats or even to excel in a sport.

Ice skating is one of the most pleasant and healthful outdoor activities. It is a form of exercise that appeals very strongly to boys and girls during the drab months of the winter. Mature persons, particularly those who are confined indoors, can also find a great deal of pleasure and profit during the cold weather months in taking their daily quota of exercise on the ice.

The practice of ice skating develops heart and lung power, and through it a greater volume of cleansing and nourishing air is carried to all the body cells. The muscles of the legs, arms, back and abdomen are developed and "pep" is injected into an otherwise listless body.

Several years ago the Chicago bureau of small parks and playgrounds instituted a city wide skating tournament. One thousand boys competed for the city championships. The second year the number was doubled, and in the winter of 1923-24 there were almost 15,000 boys entered in the preliminaries of the city wide championships. Events for girls have been added with great success.

All agencies concerned with public recreation —the park commissions, board of education, municipal playgrounds, parks and recreation committee of the Chicago City Club and the fire department—unite in helping the youngsters secure ice skating ponds. Newspapers cooperate in the matter of publicity, and assist in obtaining the consent of property owners to allow their vacant lots to be flooded.

Last year there were more than 600 skating ponds available; these were cared for by the municipality. Many excellent skaters are developed on these Chicago ponds; some of them of Olympic caliber. Intercity contests have been of great value in interesting the general public and the parents of the competitors in one of the most healthful of winter activities. Competitive meets are held in Chicago every Sunday during the winter months. On Saturdays the playgrounds and schools hold their events.

Recreational authorities are alive to the fact that ice skating is an outdoor activity that should be promoted among and taught to persons of all classes, since it has a carry-over value into adult life and is one of the most healthful and beneficial of the outdoor sports.

"The Best Thing I Ever Did for My Health"

HYGEIA PRIZE LETTER CONTEST

EVERYTHING from proper diet to palmistry, from exercise to taping the feet, from correcting bad mental habits to sewing carpet rags was named by the 179 persons from various parts of the country who entered letters in the HYGEIA *prize contest for January.*

Most of the letters contained sound advice about exercise, diet, right thinking, work, removal of tonsils, periodic physical examinations, and overcoming bad habits.

Following are the three prize winning letters and three additional ones thought worthy of publication. The latter will receive recognition by a free subscription to HYGEIA.

First Prize Letter—$25

THE best thing I ever did for my health was to fulfil the request of my superintendent to teach a class of one hundred sophomores the elements of physiology and hygiene. A teacher is her own best pupil because it is very essential that she practice all she teaches.

A detailed study of the course revolutionized my life and way of thinking. To begin with I had to correct my standing and sitting posture. It was necessary to throw off that lazy feeling and strengthen my muscles. Instead of the corset, which I now claim is an excuse for the lazy and not the weak, I practiced holding my abdomen in, chest out, shoulders back, head up and chin in. It was hard at first but a wonderful feeling of well being results in such erectness.

I learned that a small amount of iodin was necessary in my diet. Since I live in a goiter belt, I immediately consulted the best doctor in our town and on his recommendation began using an iodin salt which has possibly prevented an enlargement of the thyroid gland.

By teaching that common colds are caused by a germ and not a draft, I have avoided many colds. I try to keep five feet away from those who have colds and attempt to keep myself physically fit in order to resist any growth of cold germs. If it is impossible to isolate oneself when suffering with a cold, I advocate wearing "flu" masks, but up to the present time I have not had the courage to follow that teaching.

With regard to teeth, hair, and skin, I have learned that several simple often disregarded rules are the best to follow. To keep good teeth I eat coarser foods and visit the dentist twice a year. I never find a need for hair tonics because massaging the scalp without any preparation does as much good. We cannot feed hair from the outside. To keep a clear skin, I work from within because the skin is a reflection of one's inner self and no amount of skin foods or beauty clays will benefit the user. Good selection of food, sufficient sleep and much exercise are the essentials.

One of the main aims in my course is to teach enough of the fundamentals and principles of physiology to enable one to discrimate between true and false advertisements. This not only contributes to an individual's health of mind and body but also saves many a dollar.

I couldn't begin to list the many valuable things learned the last three years, nor could I expect to convert many readers in one letter, but I do think many other teachers could well afford to teach a class in physiology and hygiene in order to retain the health and vigor needed in this profession.

HERTHA C. STEBENS,
Tomah, Wis.

Second Prize Letter—$10

THE corporation by which I have been employed for the past seven years arranges for the annual physical examination of its employees. The best thing I have ever done for my health has been the attention given to the advice and suggestions following the examinations. The good results have been prompt and marked.

These are some of the things advised, and the results:

1. Removal of badly infected tonsils; resulted in great improvement in general health with gain of more than 20 pounds weight.

2. Removal of tooth with abscessed root; resulted in still further improvement and disappearance of recurrent aching pain in shoulder.

3. Advised to cease smoking because of enlarged heart and nervous temperament. After sporadic periods of abstinence I quit smoking two years ago and feel so much better I don't want to smoke.

4. Informed of the presence of a hemorrhoid which I disbelieved, but six months later dis-

covered some sort of small affair on a "pedicle" causing a ball-valve condition. This was tied off and removed by family physician a year or more ago, with no further trouble.

5. Informed two years ago of tendency to varicose veins of left leg not before noticed. Wide webb garters in summer and none in winter (underwear holding up the socks), with occasional self massage, appear to have remedied the defect.

The last examination a few weeks ago, shortly after my forty-seventh birthday revealed absolutely nothing abnormal about the nervous system, abdominal organs, genito-urinary system, or in the chest. Blood pressure, 125. About 12 pounds over average weight for age with too much waist-line. Slight tendency to flattening of left foot.

So much for physical health. Now as to mental health. For some time I had found myself sleeping badly and was frequently depressed in the night by the recollection of unpleasant experiences, recent and remote. Furthermore, I was subject to bursts of temper on slight provocation, the cumulative effect of small irritations. Evidently a change of intellectual and spiritual activities was needed.

First, I determined to find greater enjoyment in the multitude of God's creations, and have found it, especially in trees, flowers, birds and water—placid lakes, babbling brooks and the surging sea. Then, too, I determined to know something of the arts, and have frequented the galleries. Traveling a great deal, I have observed scenery, worth while architecture and monuments in many cities.

The greatest spiritual refreshment I have gained by the perusal of Dr. Harry Emerson Fosdick's little book, "The Meaning of Prayer." I find it worth while to attend church with as much regularity as a traveling man's life will permit.

Attention to the needs and the proper exercise of body, mind and spirit is resulting in the highest state of health I have ever enjoyed. I find myself sleeping soundly and awakening with a glad heart.

If next summer I can break 100 in my golf score, life will be one sweet song.

HENRY ARCHER,
Yonkers, N. Y.

Third Prize Letter—$5

I HAD paid the usual price for the sin of overworking and a part of the doctor's prescription for getting tired nerves rested was a daily dose of out-of-doors taken for at least one hour —the time to be preferably spent in walking. I tried to be obedient and sometimes succeeded, but it was a constant fight not to yield to the arguments of too cold or too windy or too busy, and so postpone it until a tomorrow which was slow in coming.

Then, a six-week-old puppy was quite unexpectedly added to our household. At first, there was some consternation lest he be a problem in subtraction from health instead of addition to it. We live on a busy street, and he was too valuable a puppy to be permitted to run lest he lose out in contesting the right-of-way with an automobile. He was too restless a puppy to be kept shut up, so there was nothing to do but take him with me. The daily walks became of necessity a regular habit. The puppy could outargue too cold or too windy or too busy every time.

At first, a few blocks was our limit but the walks grew longer until now, we have explored every bit of territory within two or three miles of home. I have gained many things I had not anticipated as being a part of the bargain.

I have gained time. Paradoxical as it may seem, I can achieve more in the twenty-two or twenty-three hours left after the daily walk is subtracted than I could before in the twenty-four.

I have gained friends. Dozens of little children stop for a chat and a chance to pet the puppy when I could scarcely expect more than a friendly "hello" in passing if I were alone, and walks otherwise humdrum have become quite jolly.

I have gained wealth. A beautiful park a few blocks from our home has been added to my possessions. I had often whizzed past it in an auto and I presume, as a taxpayer, I had a certain interest in it. But it never belonged to me in the sense that it does now. There has scarcely been a day this year that I have not walked through it, and I have had the joy of knowing its every flower and tree and shrub through all the changing seasons. And the city has employed a force of gardeners to keep it lovely for me, without the slightest effort or responsibility on my part.

Best of all, I have gained health. I am just sure that the long, quiet nights of sleep are more largely due to the daily out-of-door rambles than to any other part of the doctor's orders.

So I recommend this as a most excellent all-around tonic.

℞ One frolicsome puppy.
Dose: Take him out for a walk at least one hour daily. Repeat the dose, if possible.

A. T. M.
Topeka, Kansas.

Honorable Mention

IS IT possible to say what the one best thing you ever did for your health is?

To me it does not seem possible or at least in my particular case, for health is such a complex problem and the body is so related that a person might do one thing and not do another and not have good health or there might be a number of things contributing to good health.

For a long time in my life I had a realization that I was not getting 100 per cent. efficiency from my bodily engine. I started trying to find the cause. I followed faddists and fanatics, a good many of whom I have found since were unscientific. One man would say eat certain foods and another would say exercise. I tried them all but none seemed to work. Finally after putting in more study on the human body I realized more its delicate and interrelated structure.

This caused me to come to the conclusion that the health I was seeking was not to be attained by following faddists a few days or a few weeks, nor by keeping just one health law.

All of the health laws which are the laws of nature must be kept for a long period. Secondly, I realized that I must know my body or as the prophet of old said, "Know thyself."

Therefore I went to a physician and had a thorough physical examination. All that he found wrong was a pair of diseased tonsils. I immediately had them removed and for the past five years I have been observing the health laws: regular hours, a glass of water the last thing at night and the first thing in the morning, chewing food thoroughly, plenty of sleep, regular bowel action, temperance in all things, and regular exercise.

I attribute my present health and "pep" not to any one of the above but to all and perhaps others not mentioned. One of the most important of the above, I think, in keeping up my good physical condition is regular physical exercise, for I have joined a class at the Y. M. C. A. which meets regularly three times a week. Besides that I take setting up exercises in my room since my occupation gives me little physical exercise.

In summary, I would say that my health is not due to one thing but to many.

1. My health is due to the observance of nature's laws with vigilance or as Christ said, "Watch vigilantly lest ye enter into temptation."

2. It is due to my knowing myself through consultation with a physician, analyzing my needs and weaknesses and applying scientific knowledge in the best possible way to meet my particular needs.

3. It is due to my keeping in a poised, optimistic, hopeful frame of mind hoping and striving earnestly for the health which finally arrived and caused me to believe that happiness comes from health not wealth.

E. Loyd Hopson,
Wichita, Kansas.

Honorable Mention

I WAS the youngest of a family of eight, puny at birth and unable to walk until nearly two years old. I was a queer child, sulky, spiteful and oversensitive. As I grew older my carriage was a disgrace; in fact, my round shoulders were so pronounced that I seemed almost hunchbacked. Demon Sick Headaches continually trained me.

Though my lessons were easy for me, my schooldays brought me no real happiness. I had but few friends, and they were often disgusted with my temperamental ways—a fact which I realized. So moody did I become at times that I often contemplated suicide as the end for my unhappy existence.

When seventeen, I was graduated from our high school normal. The following fall I received a position as teacher in a rural school, five miles from town. Being absurdly bashful, I determined that rather than "board out" with

When She Was Bad, She Was Horrid

WHEN Martha was good, she was very, very good, but when she was bad—Oh, my! She threw herself on the floor. She beat her head against the wall. She kicked. She screamed. She fought. She bit. At four years old, she was the household terror.

A good many families and more than a few schoolrooms have Marthas. To teach them temper control calls for wisdom.

The prize letter for March concerns these young tryants of the household. The subject is "How I Control My Children's Temper Tantrums." Cash awards are as follows:

First prize letter, $25.
Second prize letter, $10.
Third prize letter, $5.

[Additional letters considered worth publishing will receive recognition by a year's subscription to Hygeia.]

Mothers, fathers, teachers, aunts, uncles and even big sisters and brothers may compete. Letters should not exceed 500 words in length, should be written legibly on one side of the paper only, and should reach the contest editor on or before January 20, 1925. The prize-winning letters will be published, but the writer's name will be withheld upon request.

Letters should be addressed to: HYGEIA Contest Editor, American Medical Association, 535 North Dearborn St., Chicago.

strangers near school, I would hike back and forth daily. This necessitated my rising at half past five, hiking five miles to school, teaching through a strenuous day of school and then walking home again.

My friends told me I would break down under the strain. Others thought me eccentric—to put it mildly—but in a few months I began to appreciate the meaning of youth. I knew what it was to have my blood go singing through my veins, to feel my muscles pulling and strengthening, to hold my head high, to breathe deeply and to see my weight increase from 93 pounds to normal.

My appetite, which had previously been nearly non-existent, became voracious. Unconsciously, I craved substantial food. My complexion became good, my eyes bright and my hair glossy. Oh, it's wonderful not to be ashamed of one's appearance, to be called attractive, especially after always having been an Ugly Duckling! This result alone has repaid me a thousand times as it would compensate every daughter of Eve.

I had a brother with whom I had always quarreled. He was the athletic type, tall graceful and very popular. I realize now his attitude toward his colorless, disagreeable little sister must have been akin to that of shame. I hated him. It seemed as though he had every thing denied me, but then I disliked almost every one at that time.

As the long walks built up my body, so they seemed to install a new soul, in keeping with my physique. Brother seemed to become proud of me and we became great pals. My face lifted from its habitual gloom into a pleasant expression. I, who had always been a lonely little thing, knew what it was to have friends hail me from across the street. My field of interests broadened until life became worth living.

I still exercise a great deal. Today, when I see some replica of my old dull self, I can hardly restrain this cry, "Get away from yourself—exercise, work, play hard. Know the pleasure of walking with glowing cheeks, shining eyes and a smile of cheer for all you meet. Know what it is to 'sit on the world.'"

ANN WINTHER,
Washington, D. C.

Honorable Mention

INTRODUCING my bachelor brother to a sweet young thing was the best thing I ever did for my health. They fell in love, were married, and lived happily ever after—and here my story begins.

The departure of the newlyweds on their great adventure left my widowed mother and me alone in our home. Our income, even augmented by my salary as an office worker, would not allow us to hire done those masculine chores which had been my brother's delight. Thus I became man of the house.

With the first wintry days came realization that heating plants do not feed and disgorge themselves automatically, and that rich-looking shiny black coal in the cellar means work for some one. I was then a delicate, anemic-looking woman, thirty years old and weighing less than a hundred pounds. My work was sedentary, and I never exercised any more than was necessary. I arose at the latest possible moment, bathed in hot water, dashed downstairs with my hat on, ready to rush away the moment I had swallowed a crust of toast and some strong coffee. Evenings, when at home, I lounged in a comfortable chair, a box of chocolates handy, and read until very late. The dark-brown taste and tired feeling of the next morning were natural consequences.

When I began to feed and groom a furnace, however, a change of habits was inevitable. Rising an hour earlier, nothing but a brisk cold sponge would give me pep enough to start coaling up. After running up and down stairs several times, shoveling in coal and out ashes, breakfast had to consist of more than a crust of bread, and with a plentiful breakfast stored away I enjoyed a brisk walk before taking my car for work. Evenings, the eternal heat question having been once more settled, I was ready for bed at a reasonable hour. I practiced my music, long neglected, and spared my eyes, tired from a day's strain, and apples superseded fudge. I didn't go out for many evenings, but when I did go I came home just pleasantly weary and immediately sank into refreshing sleep, instead of nervously tossing.

Now, after ten years and having successfully shoveled in more than 150 tons of anthracite, not to mention the shoveling out process, I am resigning and starting out on a little adventure of my own. To my new life, and partner, I can bring a woman in superb health, weight normal, eyes bright, cheeks pink and round, carriage erect, and figure pliant. There have been many groans and backaches in the process, and my change of habits were involuntary, but to my brother's marriage I can ascribe so many benefits that I truly call it the best thing I ever did for my health.

A. H. N.
Everett, Mass.

Successes and Failures of Surgery

DAVID CHEEVER

WE HAVE at our disposal several ways to cure physical ills; of these a very high place must be assigned to surgery. More direct, concrete and effective cures are made by surgery than by any other method.

Preventive medicine has done more for humanity than has surgery. The virtual control of smallpox in enlightened communities by vaccination, the eradication of yellow fever and malaria, the reduction to a minimum of the annual toll of typhoid fever and diphtheria—to mention only a few instances—have saved thousands from premature death.

In every day instances of illness, the medical internist is relatively helpless. He will make the diagnosis, he will place the patient under the most favorable environment, warn him of complications, watch for and meet so far as possible unfavorable conditions as they arise, and bring to bear such measures, whether medical, physical or psychic, as may be helpful. But he has at his disposal all too few drugs, vaccines or serums which have a direct specific action in disease, and in a surprisingly large number of cases of acute illness it is to the surgeon that he turns for effective help.

With what classes of illness or infirmities does surgery concern itself? They fall into these groups:

1. Deformities.
2. Injuries.
3. Infections causing pus formation.
4. Tumors of all kinds.

What has surgery to offer in these conditions? In treating deformities, surgery offers reconstruction, the success of which depends on the degree of deformity and on the vitality of the tissues that must be utilized in repair. It is not like rebuilding an automobile: we cannot put in a new part that will give perfect function; we can only try to make over and adapt an imperfect part. But it is fair to say that in most of the congenital deformities, reconstructive operations may be expected completely to establish a normal function, or at least to improve matters greatly.

Usually Successful in Remedying Deformities

Hare-lip, cleft palate, obstruction at the outlet of the stomach and at the anus are the imperfections of the alimentary tract that may be satisfactorily cured. The heart and blood vessels and the lungs present few deviations from the normal standard which require attempts at restoration.

In the genital and urinary system, there may be a failure of the developing body wall to close in over the bladder or urethra causing a serious infirmity. This may be usually rather imperfectly relieved, depending on the degree of maldevelopment. The generative organs may be defective in formation, or actually absent—a condition that baffles the surgeon—for contrary to the sensational misinformation current nowadays in certain portions of the press, it is not possible successfully and permanently to transplant organs from a lower animal to man, or even from one human being to another.

Deformities of the limbs, either congenital or due to disease, as for instance infantile paralysis, may usually be compensated by ingenious methods of bone-grafting, reconstruction of joints or transplantation of healthy muscle to take the place of defective ones, procedures which must be laid to the brilliant achievements of orthopedic surgery.

Deformities of the brain and spinal cord, or of the bony walls which contain them and thus interfere with function, are at best disheartening and difficult problems, but even here the modern school of neurological surgery has something to offer in alleviation, and occasionally for cure.

Turn now to the great class of injuries.

Fractures of any of the 206 bones of the skeleton may, under usual favorable conditions, be healed and restored to normal function. Here the healing power of Nature must be acknowledged to be the chief agent. The surgeon usually can replace and maintain the broken surfaces until new bone is formed to bridge the gap and solidified until it can bear normal stress. An operation to cut down on and replace fractures with the precision of a cabinet maker may be done under aseptic conditions without harm and enables the surgeon to handle successfully cases which formerly defied him.

But there are instances in which the surgeon fails. A bone may be broken into so many fragments that healing is impossible; the fracture may be "compound," which means that the broken bone has torn through the muscles and skin and introduced an infection that may defy efforts at control; the broken bone may

irretrievably damage an organ lying more deeply, such as the brain or spinal cord, the lungs or certain of the abdominal organs.

Fractures into the cavity of a joint, injuring that marvelously perfect mechanical bearing, will almost certainly impair its function in healing. A break of the neck of the thigh-bone, usually spoken of as a fracture of the hip is very likely to heal imperfectly and sometimes not at all, in spite of every effort. This is because such a fracture usually occurs in elderly people with defective powers of repair and because of certain mechanical features and peculiarities of the bone.

Wounds need but brief mention. Every person knows that a clean wound protected from infection and kept at rest will heal perfectly, quickly and almost without pain; a similar wound, contaminated with external impurities, will become swollen, painful and produce pus —a condition leading to delayed and imperfect healing, if not to general blood poisoning and death. Most contaminated wounds treated promptly by surgical principles can be made to heal without complications.

Compound fractures, before the days of Lister and Pasteur, were almost invariably infected and so frequently caused death from blood poisoning that early amputation was often the rule; now amputation is the rare exception.

Infections that produce pus, and to a less extent other types, are amenable as a rule only to surgery. An abscess is a collection of pus in the tissues caused by the activities of certain bacteria. Although an abscess rarely resolves and heals, it may usually be relieved only by spontaneous rupture after a long and painful progress, or by surgical incision and drainage, which affords free discharge for the organisms and their products, and prevents their deeper penetration into the tissues or blood with probably fatal results.

Familiar examples of superficial abscesses are boils and carbuncles; these may occur anywhere on the body. Examples of a similar process occurring in deeper tissues or organs are the abscess about the tonsil, called by the laity a "quinsy sore-throat"; the acute inflammation of the appendix with abscess or peritonitis around it; the abscess in the gallbladder. Every tissue or organ of the body, including the bones, may be the seat of an abscess. Essentially the same process occurs in the cavities of the body, such as the thorax, the abdomen or the joints, but here the inflammation is less confined and becomes rapidly much greater in extent, and usually more serious.

Wherever the abscess is situated, the treatment is essentially the same—surgical incision with the establishment of adequate drainage. Unless this relief is afforded too late, recovery will result, except in instances in which the infection is of peculiarly virulent character.

Infections occur due to other types of organisms that do not produce true pus, such as some forms of tuberculosis, syphilis, actinomycosis; in some of these cases surgery offers the best hope of relief.

Two Kinds of Tumors

Tumors are classified as (1) benign, which grow in but usually do not tend to destroy structures and are therefore harmful only as they attain greater size and tend to interfere with the function of organs, and (2) malignant, which grow in tissues, destroy them and progress to other structures which they destroy in turn, until, if not arrested, a fatal result ensues.

There are many different types of tumors, classified according to their origin and microscopic structure. Malignant tumors, comprising several varieties, are called by the laity "cancer."

True tumors belong almost exclusively to the domain of surgery; in order to be got rid of they must be removed mechanically, and if completely removed, whether benign or malignant, the patient will be cured.

The chief obstacles to removal are: the inaccessible position of the tumor, the fact that it involves organs, surgical injury of which would cause death; or in the case of malignant tumors, the already existing dissemination of the tumor cells by the blood or lymph streams. A true new growth will not disappear through medical measures such as medicine, manipulation, massage, diet, climate, heat, cold or electricity. The exception to this statement is that irradiation by x-ray and radium will destroy some superficial growths, and will, in a limited class of cases, cause the recession and even the disappearance of certain deeply seated ones.

What can surgery do to cure true tumors? Almost no region of the body is inaccessible to surgery, and from almost every organ tumors may be successfully removed. This includes the brain and spinal cord, the organs of the chest, the abdomen, and the extremities.

Can Cure Cancer in Early Stages

As a matter of actual practice, tumors of the most vital parts of the brain, the gullet, the liver and pancreas, and the prostate gland at the base of the bladder, have characteristics of location or growth that make them nearly insusceptible of complete removal; certain types of cancer beginning in bones, and some of the brown pigmented moles of the skin, are so malignant that they have almost invariably spread beyond the reach of surgery when first observed.

Cancer in its early stages can usually be cured by operation.

Here are five cancer axioms which everybody should learn by heart:

1. After the age of 35, one out of every eight women and one out of every eleven men die of cancer.
2. Cancer is at first local and permanently curable by operation.
3. Cancer nearly always gives some indication of its presence while in this stage.
4. In at least four fifths of cases cancer begins in regions accessible to surgery.
5. The majority of cancer deaths are due to delay and are therefore unnecessary.

It is unfortunate that occasionally physicians immersed in general practice are not fully conversant with what may be accomplished by modern surgery. They may consider a case hopeless while it is still operable. In so serious a condition as cancer, neither the patient nor his physician should be satisfied with a single opinion.

[*Part II of Dr. Cheever's article will appear in the February issue.*]

The Scare Punishment

BERENICE LOWE

"ANGELA simply would get into things and I punished her every way I knew how," said Mrs. Madison to her neighbor. "Then I saw the doctor's car over at your house. That gave me an idea and I just told her I'd give her to the doctor if she was naughty again. I said, 'Mrs. Walters has him over at her house now; I guess Mary has been naughty.'"

Angela at this moment came running into the house. When she saw Mrs. Walters, she stopped quickly, then watched her intently.

"What's the matter, Angela?" asked Mrs. Walters.

"Was Mary naughty?" Angela was thoroughly frightened. "What did the doctor do?"

"He gave her some nasty tasting medicine and said that would do for this time, but next time he might take her to the hospital." Mrs. Walters prided herself on being utterly truthful.

When she had gone Angela asked, "Mother, what do doctors do at the hospital?"

Mrs. Madison saw that this new punishment was bringing deep thought, and that happy results might follow, so she explained how a doctor would take a knife or scissors and cut away part of a person, or make her lie in bed a long time or tie her arm to a board and put a big cloth around it.

Shades of Hans Andersen! The weird story worked wonders. Angela's fingers stayed out of things not intended for small children.

Mary Walters came to school again a few days later. She looked rather white and her eyes seemed dark as if she might have cried a lot the day before. Angela wanted dreadfully to ask her all about the doctor's visit, but withheld her questions because she knew how she disliked being reminded of her own punishments. And oh! she was very careful not to get into things.

It was the next winter that Angela was sick—the very first time in her life, her mother said. Every one was worried. The doctor came. In spite of her weakness from fever, Angela showed remarkable power in fighting away the doctor. She screamed when he attempted to take her pulse; she refused to take medicine and spilled it when it was offered to her; she wouldn't let the doctor look into her throat.

The second time the doctor came she was worse. Fortunately for Mrs. Madison, who had been very unwise in her choice of stories for Angela's punishment, the physician was a wise man. He sat down in Angela's room and called her brother to him. The boy climbed to his knee and then the wise doctor seemed to forget all about being a doctor and became a story teller. He told about fairies and about little people whose meal is just a teaspoon of a clear red liquid something like grape juice. At the end of a half hour he had gained Angela's interest and confidence to a slight degree—enough so that he could do something for the sick child.

A physician who is a specialist in children's diseases recently declared his greatest bugbear is not scarlet fever, not any of the other awful children's diseases, but rather the fright germ the parents have implanted in the minds of the children before sickness comes.

Parents can easily prepare their children for operations, so that even the pain and discomfort will not take away their faith in the surgeon. The mother's explanation before and after a visit to the doctor's office will keep away fear and dread of that office. False stories to scare children are in themselves crimes, but a false story about a doctor is much worse than about the "boogy man who'll get you if you don't watch out."

"The doctor is your friend and he is coming to make you well." That is a *real* bedside story.

EXPLOITING THE

III. Modern Magic—Some Freaks

WHEN magicians were a part of the established order, it is probable that an occasional follower of this line of human activity really believed in his own magic. But most of them were shrewd charlatans who found it easy, in a witless world, to live by their wits. Merlin was a better knave than fool.

So today, among the advocates of freak diets presented so alluringly to a public profoundly ignorant of even the most elementary facts of the science of nutrition, there may be an occasional misguided faddist who believes in his own fad. The majority of these individuals, however, work with tongue in cheek and belong to that vast army that toil not neither do they spin.

The ease with which the public may be reached through the printed word has made the path of the food faddist an easy one. The difficulty of proving fraudulent intent makes the game a comparatively safe one. In only one instance (to be mentioned later) has an exploiter of this type been debarred from the use of the United States mails. He is again doing business.

Eugene Christian

The dean of American food faddists is Eugene Christian, who carries after his name the mystic letters "F.S.D.," apparently a self conferred "degree." Some years ago Christian was a salesman; later he went into the hotel business, but this venture, apparently, was not successful. Still later, he began the manufacture of fad foods and developed what was known as "The Christian Natural Food Company." This also failed.

A little more than a decade ago Christian was selling a special brand of bran and running a mail order "school" that he called the "Eugene Christian School of Applied Food Chemistry." Those who answered the advertisement of this school first received a letter offering the "course" for $100 and emphasizing the fact that persons completing it would be given a "diploma" which would confer on them "the degree of F.S.D. (Doctor of Food Science)." This degree, continued the letter, gave "the right to practice the Science of Curative Feeding."

In the second letter of the follow-up series the price was reduced to $45 and Christian pointed out that neither a knowledge of chemistry nor a college education was necessary to master the "course": "It requires only common sense," the letter declared. Only! And this in a world in which common sense is most uncommon—much rarer, certainly, than a college education!

Stomach Trouble Can Be Cured by Correct Eating!

By Eugene Christian

Since all stomach trouble is caused by wrong eating and the wrong combination of foods, it can be cured by eating correctly. No matter what methods you may have tried to rid yourself of stomach and intestinal trouble, be sure to send for my free booklet, "How Foods Cause and Cure Disease." It may lead to quick permanent relief for you, as it has done for thousands of others. No cost—no obligation.

© Marceau

YOUR energy, pep, vitality, driving power depends on how your food digests and the action of the bowels. And this is controlled wholly by the way your food is selected and combined at your meals. You can eat three big meals a day and yet be literally starving, because your meals are out of balance. If the foods you eat do not contain the right proportion of all the elements your body needs you will suffer from stomach acidity, gas, torpid liver, mental depression, rheumatism, neuritis, nervousness, constipation, headache, stomach catarrh or ulcer or stomach cancer. These ailments are often the forerunners of more dangerous diseases, and the final breakdown of the whole system.

The logical preventive and remedy is correct eating, which is merely the selecting, combining and balancing of your foods at meals.

I Will Show You the Way

I receive hundreds of letters like these:

"Dear Dr. Christian: It is simply impossible for me to give you an adequate idea of the relief realized from your instructions. To be entirely free from pain—to be able to get more natural sleep—to have a natural action of the bowels—to feel rested in the morning, as not in years—is surely something to be grateful for." Thus writes A. E. Wallace, of Toronto, Canada.

"I haven't words, Dr. Christian, to tell you my gratitude for what you have done for me. I can't believe I am the same woman. I am truly made over in every way." Principal of Public School of Brooklyn.

I could fill this magazine with letters like these.

Don't Suffer Any Longer

No matter how complicated your sickness may be, correct eating is your first and best remedy. You can be free from sickness, strong, healthy, vigorous and full of fighting energy every day in the year if you want to be. If your food ferments and you are nervous, sleepless or run down, the remedy lies in your eating. I have not had a cold or felt a single sense of fatigue in twenty-five years. My 25 years of experience I offer to you. I can show you how to eat your way back to health and strength.

Thirty years ago I was sentenced to death by the doctors (stomach and intestinal trouble), but I am sixty years old (or rather young), and feel 100% fit every minute, all due to changing from wrong eating to right eating. Eugene Christian.

Mail Coupon for Free Book

If you are interested in this vital subject clip the coupon, write your name plainly upon it and mail it to me and I will send you a new booklet or folder I have just written, called "HOW FOODS CAUSE DISEASE AND HOW FOODS CURE." This booklet will tell you what happened when the doctors passed the death sentence upon me. This booklet may start you on a new line of thought that will make you 100% alive. Write for it today before you forget it.

EUGENE CHRISTIAN, F. S. D,
Suite 2-C
The Dorilton, Broadway and 71st Street
New York City

EUGENE CHRISTIAN, F. S. D.
Suite 2-C,
The Dorilton, Broadway and 71st Street,
New York City, N. Y.

Dear Doctor:
Please send me, without cost or obligation, your booklet, "How Foods Cause and How Foods Cure Disease."

Name.....

Address.....

Photographic reproduction (greatly reduced) of one of Eugene Christian's recent advertisements appearing in "Physical Culture."

The third and last letter of the follow-up offered a "complete course (24 lessons) of study in scientific eating," all for $10. This, according to the letter, would qualify the purchaser "to diagnose all stomach and intestinal trouble, and to prescribe a curative, remedial or normal diet therefor."

In 1914 the "Christian Dietetic Society and School of Scientific Eating" was selling a "Course in Scientific Eating." The price was $10. In 1915, this had come down to $5. In the latter part of 1915 Christian and two others incorporated "The Corrective Eating Society" under which Christian's course was again advertised, this time for $3.

HEALTH INTEREST

and Fallacies of the Food Faddists

This "Course in Scientific Eating" purported to give persons with no fundamental knowledge of the human body or its processes alleged instruction in the treatment and cure of disease by a so-called dietetic "system"—a system devised by an individual who, scientifically, was as ignorant as those he would teach. It was a case of the blind leading the blind.

The "course" consisted of twenty-four "lessons." They contained the usual number of platitudes regarding diet, obvious banalities. The alleged physiological and chemical facts that were given were hopelessly untrustworthy and incorrect. The entire "course" contained less real information on the subject of elementary dietetics than might be found in the average high school textbook on hygiene and physiology.

APPLICATION FOR STOCK
CHRISTIAN'S NATURAL FOOD CO.
STOCK SUBSCRIPTION FORM
To VITAMIN FOOD CO., Inc.—I hereby subscribe for ..... shares
FOOD CO., Inc., a corporation organized under the laws of Delaware.
This subscription is for ..... shares of preferred at $100 and
..... shares of common at $5. a share.
(check
My (money order for $ ..... is enclosed herewith
(express money order
This stock is to be issued in the NAME OF:
Street
City State
Date

Christian sent out application blanks to those on his "sucker list" in an effort to get them to sign on the dotted line for stock in oil wells and fad foods.

Some of these "lessons" discussed the cure of gastric catarrh and gastric ulcer. Some purported to tell how to cure "intestinal congestion (constipation)." Still others dealt, respectively, with appendicitis and nervousness, while the last lesson in the "course" was on "Diagnosis Simplified and Made Practical." The "course" glorified Christian as an alleged food scientist and advertised some of his fad foodstuffs. To quote a few of the grosser inaccuracies with which the "course" teemed:

"Autointoxication is so called because the decomposing foods generate alcohol. . . ."

". . . calcium phosphate, the principal element of starch. . . ."

"In northern countries such articles as grapefruit, lemons, limes, pineapples, apricots and all highly acidulous fruits should be avoided save, perhaps, in exceedingly warm weather. Taken at other times . . . this diet results in crystallization of the starch atom, and produces the blood crystal; this in its turn, produces rheumatism, gout, lumbago, knotted hands and feet, arteriosclerosis, stiff joints and premature old age."

Of course there is no calcium phosphate in starch, there is no starch atom and citrus fruits no more cause a crystallization of starch than they cause an eclipse of the moon.

Those who purchased Christian's "course" were later badgered with letters urging them to buy his new five volume "Encyclopedia of Diet" which was described as "the crowning achievement of the world's greatest food scientist." They were told further that "nowhere else in all the world" could the information contained in this "Encyclopedia" be had for "no other living man could have written such a book, for no other man has devoted his life to working out and making practical this great world science—the Chemistry of Food and Its Relation to the Human Body." Each of these statements was a specific and definite falsehood.

Nor was this all. Purchasers still later received a letter signed Eugene Christian, suggesting that if the recipients were "afflicted with any digestive, assimilative or eliminative disorders" they should, by all means, fill in the diagnosis blank (enclosed) and send it with $45 to Christian for a mail order diagnosis and treatment. If they failed to bite they received another letter, this time from the "Society" stating that Eugene Christian would personally lay out a "series of menus," for the particular needs of the persons written to, all of which would be sent free of charge, provided the "Encyclopedia of Diet" was purchased within three weeks.

Ideal Figure in Two Weeks

During 1922 and 1923 the "Corrective Eating Society" commercialized the fad for a svelte figure and advertised an "amazing new discovery" that would permit obese women to reduce to the ideal figure in two weeks. It was all to be done by the "Vaco Reducing Cup," which was said to remove fat as one uses "an

eraser to remove a pencil mark." "Science has produced this new invention and it removes the fat from the very place you want it removed," it declared. It was only necessary to use the device "three minutes night and morning" to bring about whatever reduction in weight was desired. And we laugh at those who purchased wooden nutmegs!

The Vaco Reducing Cup was made of rubber and very similar in construction to the rubber appliances sold by the "bust developer" fakers. One woman who purchased a Vaco Reducing Cup and found that it was valueless except as a means of raising welts decided to turn the thing to some real use. By attaching a wooden handle to it she finds she has a fairly efficient force pump for flushing the drain pipe of the kitchen sink.

But a food fad clientele offers other opportunities for separating the gullible from his gold. In the early part of 1921 those who were on Christian's "sucker list" received a circular letter addressed to his "patients and readers." This letter was to the effect that Christian had cured a diabetic Texan, who was interested in the oil business.

In gratitude the Texas gentleman came to New York and told Eugene Christian that he had "50 acres of ground in the center of the richest oil field in the world" and he wanted Christian to get in with him on the ground floor. The letter then stated that Christian had put "every available dollar" he had "into the enterprise." All leading up to the suggestion that the recipients of this printed letter should join Christian. He wanted one thousand of the many "prospects" to whom he was sending this letter to send him $100 each for the purchase of ten shares apiece. More than ten shares could be had if desired. The check was to be made payable to the oil company but sent to Christian.

During the past year Christian has been before the public as president of a concern that put out, among other things, Vita-Pep. Those on his sucker list received typical promotion material and were given the opportunity to sign on the dotted line. Vita-Pep contained 16 per cent. alcohol and was said to contain some pepsin, rennin and vitamin B. A half wineglassful of Vita-Pep, the amount recommended, might be counted on to brighten up an otherwise drab world. The public was urged to buy Vita-Pep not only by the bottle, nor even by the case (12 pints to a case) but by the half dozen cases. Why buy wine of a bootlegger when you could purchase six cases of Vita-Pep for $45?

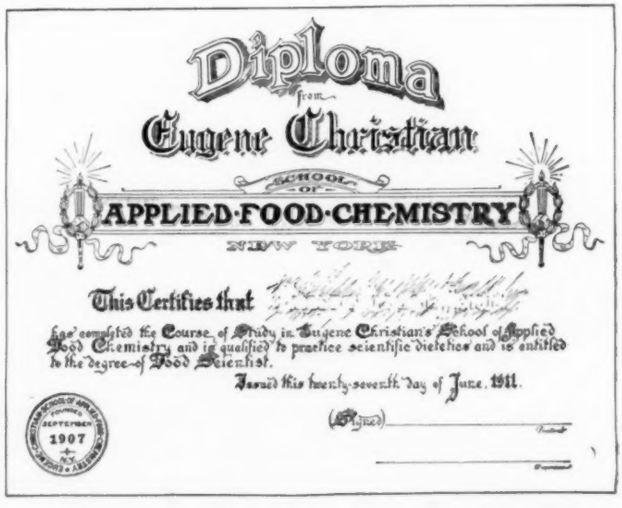
Recently Eugene Christian seems to have disposed of his interest in Vita-Pep and the accessory products and he is now (December, 1924) advertising in such publications as *Physical Culture* urging the public to send for his free booklet "How Foods Cause and Cure Disease." Those who answer the advertisement get a letter in which Christian states that he has been practicing dietetics for more than twenty years and has treated about 200,000 people by correspondence. He says he has never seen a case of "stomach or intestinal trouble" that could not be benefited ("most of them cured") by a balanced remedial diet.

His "free booklet" is a four page affair which demonstrates the lack of knowledge on the part of the medical profession and the erudition of Eugene Christian. It closes with the statement that Christian is now devoting his life to the relief of human suffering and the saving of human life. All you need to do is to fill in the diagnosis form that accompanies the first letter, send it back to him with a check or money-order and he will send you a set of menus that will remove the cause of disease. The price is $60 for three months' "treatment."

Dr. Harvey W. Wiley once paid his respects to Christian's monumental ignorance in these words: "When one examines his [Christian's] dicta in the light of real science, the wonder grows beyond expression that it is possible for any one to make so many inaccurate and misleading statements in so small a space . . . . The charitable view is to ascribe all Christian's crudities and monstrosities of statement to ignorance or lack of opportunity for scientific study."

Brinkler, "Food Expert"

For years G. H. Brinkler, formerly of Washington, D. C., and now of New York City, has advertised as a "food expert" and "food specialist." His business is conducted on the mail order plan. He purports to sell expert advice on dieting. In effect, Brinkler pretends to treat and cure any disease by prescribing a particular diet for the individual suffering from that disease.


Diploma
from
Eugene Christian
SCHOOL OF
APPLIED·FOOD·CHEMISTRY
NEW YORK
This Certifies that
has completed the Course of Study in Eugene Christian's School of Applied Food Chemistry and is qualified to practice scientific dietetics and is entitled to the degree of Food Scientist.
Issued this twenty-seventh day of June, 1911.
1907

This is a reproduction of the "diploma" issued by Eugene Christian to those who took his mail order "course" in the "School of Applied Chemistry."

Brinkler is not a physician, a pharmacist or a chemist, yet he has obtained money from people for opinions that he expressed on medicine, pharmacy and chemistry. Instead of selling nostrums in the form of drugs, Brinkler sells nostrums in the form of advice.

Those who are familiar with the history of contemporaneous "patent medicines" will remember that a few years ago the slogan for Peruna was that it cured catarrh. That's all—just catarrh. But according to the Peruna thesis, catarrh was whatever happened to ail you.

Brinkler seems to have appropriated this theory, for, according to him, pyorrhea is catarrh of the gums, appendicitis is catarrh of the appendix, pneumonia is acute catarrh of the lungs, consumption is chronic catarrh of the lungs. Presumably a soft corn is catarrh of the toes. Following out Brinkler's theory we learn that the cause of catarrh is improper eating; the cure of catarrh, and, therefore, the cure of whatever ails you, is the "Brinkler System of Eating."

But let Brinkler expound his own theory by our quoting from Leaflet 3 now being sent out:

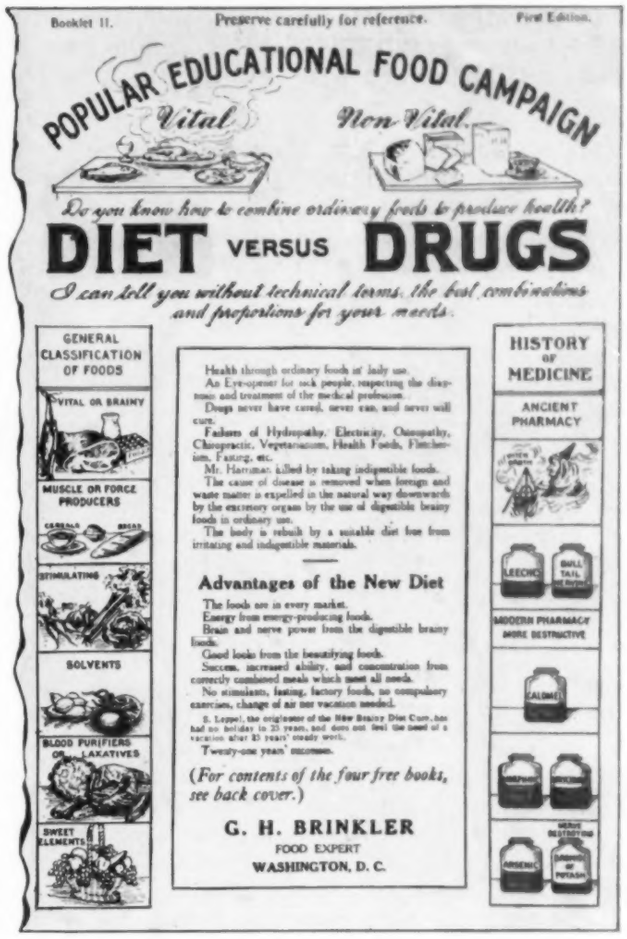
"The most destructive dirt is internal. In the interstitial spaces of the body of a haphazard eater, there is stored mucus or 'glue.' This condition is known as catarrh. There is catarrh of the nose, called rhinitis; catarrh of the eyes, conjunctivitis; catarrh of the gums or pyorrhea; catarrh of the stomach, or gastritis; catarrh of the appendix, called appendicitis; catarrh of the bronchial tubes, called bronchitis or asthma; catarrh of the lungs or consumption, and in its acute form, pneumonia.

"The cause of catarrh is wrong selection, proportion, combination and sequence of foods. For instance, if eggs, milk, cream, butter, cheese, oil, fat or salt and certain other foods are used in excess of the power of digestion, or in wrong combinations and sequence they form mucus. Nevertheless each article of food is beneficial under proper conditions.

"The means of restoring health is by correcting the selection, combination and proportion of foods to suit the individual's varying needs, according to rules of the natural system of eating, namely, the Brinkler System."

A few years ago Brinkler ran afoul of the postal authorities, his business was declared a fraud and the mails closed to him. At that time Brinkler operated from Washington, D. C., and his advertisements were usually headed "Popular Educational Food Campaign," and were so arranged as to give the impression that Brinkler himself was connected with some department of the government.

His claims proved that the fraudulence of his operations was exceeded only by his ignorance of the subject in which he professed to be a specialist. According to Brinkler, certain foods cause tumors, cough and "catarrh"; too much cream, butter and cheese may produce deafness and discharging ears; some foods "make one Nervous, Shy and Low-Spirited," others produce "the finest quality of Vitality, Electricity, Magnetism or Intelligence."


Booklet II. Preserve carefully for reference. First Edition.

POPULAR EDUCATIONAL FOOD CAMPAIGN

Vital Non Vital.

Do you know how to combine ordinary foods to produce health?

DIET VERSUS DRUGS

I can tell you without technical terms, the best combinations and proportions for your needs.

GENERAL CLASSIFICATION OF FOODS

VITAL OR BRAINY

MUSCLE OR FORCE PRODUCERS

STIMULATING

SOLVENTS

BLOOD PURIFIERS OR LAXATIVES

SWEET ELEMENTS

Health through ordinary foods in daily use.

An Eye-opener for sick people, respecting the diagnosis and treatment of the medical profession.

Drugs never have cured, never can, and never will cure.

Failure of Hydropathy, Electricity, Osteopathy, Chiropractic, Vegetarianism, Health Foods, Fletcherism, Fasting, etc.

Mr. Harriman killed by taking indigestible foods.

The cause of disease is removed when foreign and waste matter is expelled in the natural way downwards by the excretory organs by the use of digestible brainy foods in ordinary use.

The body is rebuilt by a suitable diet free from irritating and indigestible materials.

Advantages of the New Diet

The foods are in every market.

Energy from energy-producing foods.

Brain and nerve power from the digestible brainy foods.

Good looks from the beautifying foods.

Success, increased ability, and concentration from correctly combined meals which meet all needs.

No stimulants, fasting, factory foods, no compulsory exercises, change of air nor vacation needed.

S. Leppel, the originator of the New Brainy Diet Cure, has had no holiday in 25 years, and does not feel the need of a vacation after 25 years' steady work.

Twenty-one years' success.

(*For contents of the four free books, see back cover.*)

G. H. BRINKLER
FOOD EXPERT
WASHINGTON, D. C.

HISTORY OF MEDICINE

ANCIENT PHARMACY

LEECHES

BULL TAIL

MODERN PHARMACY MORE DESTRUCTIVE

CALOMEL

ARSENIC

Photographic reproduction (reduced) of a page of some of the material sent out by Brinkler at the time he did business from Washington.

In his advertising, Brinkler urged that ten cents be sent for his "valuable instructive booklet" entitled "The New Brainy Diet System." The inference was that this booklet would give valuable advice on diet; as a matter of fact, it was merely an advertising pamphlet devoted to the further exploitation of Brinkler and his alleged system. In addition to testimonials, Brinkler employed the tactics common to quacks, that of attempting to frighten his prospective victims. "REMEMBER MY ADDRESS IN THE HOUR OF APPROACHING DEATH," he grewsomely suggested in large, black-faced type.

Every booklet sent out by Brinkler contained a "question list" blank. This was to be filled out by the recipient and sent back to Brinkler with $1. Those who sent the dollar with the filled-out blank received a letter stating that the various ailments described on the blank were due to improper diet. No advice was given, however, as to what constituted correct diet, but Brinkler stated that he would give advice regarding the correct diet to use in the case on the receipt of $40, $60 or $75, as the case might be.

In investigating Brinkler's scheme, the post office inspectors filled out some symptom blanks and sent them, each with a dollar, to Brinkler for advice.

How Brinkler Was Exposed

One of these blanks was sent under the name F. G. Harris and described a number of more or less vague symptoms. Brinkler's reply to Mr. Harris consisted of a repetition of the symptoms given in the blank, followed by the statement that each condition was the result of improper diet. No suggestions were offered as to what constituted a correct diet in Harris' supposed case, but Brinkler offered to "undertake" the "case" for $60—cash in advance. For this amount he promised to send three letters of advice. As the $60 was not sent, Brinkler sent a follow-up letter urging again that the money be forwarded, and stating that he was positive that the Brinkler "food system" would "cure the complaints."

Another symptom blank, in the name Walter Hadsel, was filled out describing symptoms that might have been due to cancer of the stomach and which are sufficiently serious to call for prompt and definite action. Hadsel was told that his condition was due to improper diet and that Brinkler would take the case for $75, prepaid. Brinkler was "positive that our food system will cure your complaints."

The post office inspector in charge of the case is said to have testified that he interviewed Brinkler and asked the "food expert" whether he thought corns were due to incorrect feeding. Brinkler is said to have replied that corns were due to eating certain breakfast foods like corn flakes!

The evidence showed that Brinkler employed a number of girls, none of whom had any medical knowledge, and that he had a so-called "model book" which contained paragraphs applicable to a large number of symptoms. Another "model book" contained paragraphs prescribing a diet for the relief of various symptoms. The correspondence was then handled in an automatic way by the girl employees; one of them underlining the symptoms given and another specifying the paragraphs to be copied from the "model book."

The same symptoms always elicited the same reply regardless of the cause of the symptoms. Every case was accepted, no matter how serious and even people who admitted having cancer or valvular heart trouble or a similar serious condition were told the Brinkler "food system" would cure their complaints.

One example of Brinkler's callous indifference was described in the government's report. The case was that of a Pennsylvania woman who was induced by a Brinkler advertisement to telegraph him regarding her seventeen-year-old boy who was in the last stages of pulmonary consumption. Brinkler replied, also by telegram: "Wire $40 for quick relief followed by a complete course."

Brain-Feast
BRAIN & NERVES
INTENSIVE FEEDING, JUICES, NO WATER
BRINKLER SCHOOL OF EATING
131 West 72nd Street
New York
Catarrh, Etc.
Your blood, containing fruit acid, is the only substance that can dissolve any mucus or "paste" in your system.
Mucus-Making Foods
100 Names for 1 Disease
Correct Eating Cures
BRAIN & NERVES
Tubercular Catarrh
Why Envy the Live-Wire?
BRINKLER SCHOOL OF EATING
Dept. 2-F 131 West 72nd St., New York
Constipation
BRAIN & NERVES
BRINKLER SCHOOL OF EATING
Dept. 2-H 131 W. 72nd St., New York

Brinkler advertisements appearing in recent issues of "Physical Culture"

The woman wired the $40 for the treatment referred to and received instructions as to what food should be given to the boy. Shortly thereafter the boy died. Brinkler was informed of this and of the destitute circumstances in which the mother found herself and urged to make a refund. This he declined to do.

In view of all the evidence in the case the postal authorities declared Brinkler's business a fraud and debarred him from the use of the mails. This was in 1914 at Washington, D. C. In April, 1915, and again in May, 1916, the fraud order against Brinkler was extended to cover other names under which Brinkler attempted to evade the original order. The original fraud order and both the supplemental fraud orders are still in effect.

Today Brinkler is "food experting" from New York City as "Manager" of "Brinkler's School of Eating." The concern has for its "Medical Director" one W. Wallace Fritz, who, apparently, lives in Philadelphia, and has, in other places, been described as W. Wallace Fritz, M.D., D.D.S., N.D., D.O., D.C. This seems to be the same man who was "Dean" of the egregious "American College of Neuropathy" and who, when called into court to testify on the subject admitted that when he became "Dean" the "College" had thirty "faculty members" and three students!

Mysterious Powers of Grapefruit and Tomatoes

What is Brinkler's present method? First, the contact with the victim is made through such publications as *Physical Culture*. In these advertisements the public is told that grapefruit and tomatoes will dissolve tumors, goiters, gallstones and blood clots and will remove the source of consumption. The public is urged to send 10 cents for Brinkler's "educational booklet."

Those who send the money, get a long letter printed in imitation typewriting and containing the usual amount of Brinklerian misinformation. With the printed letter is a mass of other printed material. From it the prospective victim learns that Brinkler will, for a consideration, advise what foods will "generate Healthy Animal Life and Animal Magnetism"; he will be told how to eat so as to double the brain power and what foods to take to become a loving husband—and many other things. He learns, too, that practically all diseases are "catarrh," that "catarrh" is caused by wrong food combinations and can be cured by the "Brinkler System."

With the letter is a double page of testimonials. One of these relates to an old, bedridden lady of eighty "who used to have gallstone attacks every four days" until she took the Brinkler system; now she is doing her own housework and has no gallstone trouble.

Another tells of a man who took the Brinkler treatment and his "brain pressure" was removed, his memory restored, his nasal catarrh cured and his working power doubled. Still another describes an alleged case of prostatitis, inflammation of the prostate gland. This is prefaced by a statement of Brinkler's to the effect that "most men have this complaint from after twenty-five years of age, few escape it around forty years of age"—a ridiculous falsehood. According to the testimonial, prostatitis of three years' duration was cured by the Brinkler diet in two weeks.

The main piece of advertising that comes with the letter is a booklet entitled "Brinkler's School of Eating." This develops the Brinkler thesis that catarrh is the "one underlying cause of all disease." It would be hard to find in the same space as many mischeviously unsound statements as appear in this booklet.

In addition to the matter just detailed, there is also a diagnosis blank which Brinkler calls a "question list." Brinkler used to get the public to fill in this diagnosis blank and send it in with a dollar. Nowadays, the public may send it in for nothing; what the public gets in reply is just as valuable as what the "diagnosis" costs.

In reply to this diagnosis blank one gets no information that is of the slightest value but is urged either to come to New York and take two weeks' instruction in the Brinkler "dining room and class room" (price, $300) or get "instruction and guidance by mail" (price, $50).

Brinkler says: "We do not treat disease, but teach the effect of foods in different combinations and proportions to suit the reported activities, physical and mental, of the pupil." In view of this, one wonders what are the functions of "Medical Director" W. Wallace Fritz, M.D., D.D.S., N.D., D.O., D.C.

When one turns to some of the alleged cures reported by Brinkler, the potential dangers of the scheme make themselves apparent. One case described is that of cancer of the rectum and the public is led to believe that by the Brinkler system of diet such a condition may be cured. The suggestion is cruelly and wickedly false.

All in all, it is difficult to see in what way Brinkler's present business is any more respectable than the one which was debarred from the use of the mails in 1914, 1915 and 1916.

[*Next month some additional food faddists will be dealt with in this department.*]

Ferry Boat Schools

TO GO to school is no great adventure; attendance is compulsory. To be in a hospital is very hard luck indeed, while to have tuberculosis is just about the most unpleasant thing that can happen to a boy or girl. To study at lessons, to live in a hospital and to have tuberculosis, all at the same time, is a downright tragedy, unless—

You can do all three on board ship.

That is what several hundred New York school children do, and it makes school, hospital and suffering into something approaching story book romance.

Not in all the lore of piracy can one read of boats being rigged out with desks and cots, as are the three school hospital ships when they set sail each morning on their daylight voyage. If the crew is not yet bronzed by tropic suns, if they carry arithmetics instead of cutlasses, if indeed they resemble malnourished school boys more than swashbuckling pirates, what's the odds?

For an hour each day they lie flat on their deck cot, and then it is easy to watch the stars and stripes on the flag pole fade into the black and white emblem of skull and crossbones, to deck greedy sea gulls in gaudy parrot colors, and to blindfold a swarthy deck hand and make him "walk the plank" into the river.

Ferry boats have been fitted out to accommodate several hundred New York school children who have incipient tuberculosis, and these youngsters fill their days with study, rest and wholesome food on board a ship. They have a regular schedule of lessons, naps, and lunches of hot nourishing foods.

When the weather is inclement, there are inside classrooms with plenty of fresh air in circulation. Wooly hooded garments are provided to keep them snug and warm, and the healing of lungs and bones is left to fresh air and sunshine.

Mariners by day are these New York school children. Each morning they embark on a floating tuberculosis preventorium and eat, sleep and study in the fresh air and sunshine.

Photos by International

Box Lunches for School Children

RUTH T. LEHMAN

THE box lunch is still a necessity in some communities, for many children live so far from school that they find it impossible to go home for the noon meal. Thus, there is presented a real nutrition problem that must be recognized and solved. Its answer is not found in simply banishing from the lunch box left-over cold pancakes or cold potatoes, for the lunch even then may be far from perfect. It may be so poorly selected as to be inadequate in amount or kind of food, or both; it may be so monotonous from day to day that much of it will go untasted. How may these mistakes in planning be avoided?

Lunch Should Be a Meal

In the first place, it is important to remember that the lunch should be a meal, not a means of "tiding over" until after school or until supper-time. It is easy to wrap up some sandwiches and a few pickles, or to pack some unappetizing left-overs, a slice of cake, some pudding, and a piece of pie, and say that the lunch is ready. Yet even she who prepared it would not pretend to call it a meal.

Children's needs are not met by such haphazard food combinations. The child exercises strenuously much of the day, and he requires plenty of fuel to provide him with the necessary energy. The fact that his exercise is largely play rather than work makes his need no less. He is growing rapidly; therefore he must have building material in the form of substantial, well chosen foods.

If these fuel and building materials are not well provided in his lunch, the chances are that his daily intake of food will be insufficient; for it is difficult to make up at other times for the inadequacies of one meal of the day. The lessened intake becomes habitual, and soon the child may be well on the way to malnutrition.

Should Include "Factors of Safety"

Since the lunch is to be a meal, of what shall it consist? Of course, we must be certain that it includes essential foods. These are milk and fruit and vegetables, called by some "factors of safety in the diet." Milk gives good building material, and all provide needed minerals and those important substances known as vitamins.

Milk is listed first, for that boy or girl whose diet does not contain it has little chance of growing strong bones and good teeth. Fortunate indeed is the child who gets his pint—or perhaps quart—a day. Needless to say, some of this milk must be included in the noon meal.

The simplest way in which it may be given is as a beverage, and, if the milk is bought in bottles, packing presents no difficulty. A small thermos bottle is perhaps an even better container, for it can be used for cocoa or cream soup as well, and thus makes possible the inclusion of a hot dish in the meal. More milk may be used in combination with other foods to form simple yet popular desserts; custards of different flavor, creamy rice pudding, tapioca cream, chocolate or orange bread pudding. These are all most nutritious, and, if attractively prepared and judiciously introduced in the diet, may in time supplant the indigestible piece of pie that so often appears in the lunch box.

Fortunately fruits and vegetables—the other safety factors of the diet—are rather interchangeable, for most vegetables do not lend themselves well to the box lunch. Valuable exceptions are a few which can be served raw: lettuce, celery and tomatoes. Most children like them, they give a touch of crispness to the meal, and they are among our very best sources of vitamins.

Fruits, on the other hand, offer a much wider range from which to choose. Served raw they are well liked, and have the further advantage of being easily carried. Cooked fruits are popular and may be packed safely in waxed cartons now available for the purpose, or in small screw top glass jars. Thus the number of possible variations may be extended. Some fruits may be served as sauces; others may be baked; some may be used to vary the flavor of different cereal puddings; dried fruits—such as prunes or dates—may be steamed and stuffed with cottage cheese or peanut butter.

Try to Avoid Monotony

Milk, fruit and simple sweets plus well-chosen sandwiches provide a good lunch. But how monotonous those sandwiches may be!

One can readily sympathize with the little girl whose lunch day after day consisted mainly of jelly sandwiches. Their sweetness soon satisfied; as a result, much of the lunch was left after school when the child was again hungry; sweetness once more deadened the appetite; and the rest of the lunch was thrown away. Continued monotony simply means that less food will be eaten, and, therefore, that the child's needs will not be satisfied.

CHOOSE THE LUNCH FROM SUCH FOODS AS THESE

Choose

Milk
As a beverage
In cocoa
In cream soups
In puddings
(See desserts)

and **Sandwiches**

Bread	*Fillings*
White	Butter
Oatmeal	Egg
Graham	Peanut butter
Raisin	Nut pastes
Prune	Salmon
	Baked beans
	Cheese
	Chopped raisins or dates
	Jam or jelly
	Meat (sliced or chopped)

or **Bread and Butter** and **Such Foods as**
Hard cooked egg
Nuts
Dish of baked beans
Piece of cheese
Sliced meat
etc.

and **Fruit or Vegetables**
Raw fruit
Apples
Oranges
Plums, etc.
Fruit sauce
(fresh or dried fruit)
Stuffed prunes or dates
Celery
Tomato
Lettuce

and **Simple Sweets**
Gingerbread
Peanut cookies
Date cookies
Oatmeal cookies
Sponge cake
Custard
Fruit tapioca pudding
Cornstarch pudding
Bread pudding
Creamy rice pudding
Fruit

How may variety be introduced in the sandwiches, which make up the bulk of the lunch? Perhaps the simplest method—and least used—is that of varying the bread which is the foundation. Did you ever know a child who did not like nut bread? Variation by means of rolled oats, graham flour, prunes, raisins, or dates will prove as popular a change.

Possible sandwich fillings are almost endless in number. Yet simple ones may be chosen: egg, nut pastes, salmon, baked beans, meat (sliced, or chopped and mixed with salad dressing), cheese, chopped nuts, dried fruits, celery, lettuce and tomato.

Supplement the Lunch with a Hot Dish

The sandwich meal, however, will be somewhat monotonous, no matter how much the fillings may be varied. Therefore, it is well sometimes to serve a cup of baked beans, slices of meat, a piece of cheese, or a tomato, with bread and butter, rather than to give the same foods in the form of sandwiches.

No one pretends that the cold box lunch is the most desirable of meals. It is a well known fact that every one—adults as well as children—will eat more food and with more enjoyment, if some of it is hot. Therefore that lunch is best which is supplemented with a hot dish.

In individual cases, this may be accomplished through the use of a small thermos bottle. But the type of hot food which may be provided is thus limited to liquids, and only a few of the children may be helped.

Many communities have come to a realization of the need and have provided for the serving of one hot dish at school. Often this is accomplished through active cooperation of the mothers. They may alternate in giving supplies for the meal; they may send the hot dish already prepared; they may prepare it at the school. Sometimes teacher and pupils assume the responsibility. In that case, a small fireless cooker often proves to be a most valuable time saver and a means of keeping the food hot. In larger schools, a woman may be engaged to prepare one or two hot dishes daily.

No matter who prepares the food—mother, teacher and pupils, or hired worker—the project is a needed one and well worth the time and effort it requires. It is rich in opportunities for the active teaching of nutrition and for the establishment of good food habits.

Some Suggestions for Good Lunches

The following meals are suggested for the help of those who plan the school lunch. Each one contains milk in some form, often in a hot dish. Each meal includes a building food: milk, meat or meat substitute, or an egg dessert. Each one supplies minerals and vitamins in milk and fresh vegetables or fruit. Monotony is avoided by varying the form in which the food is served and by varying texture and flavor.

I

Baked beans
Bread and butter
Milk
Apple
Cookies

II

Tomato or lettuce
Bread and butter
Cocoa
Baked custard

III

Cream of spinach soup
Salmon sandwiches
Oranges
Gingerbread

IV

Cheese sandwiches
Milk
Apple sauce
Sponge cake

Keeping Employees in Good Health

JOHN D. ELLIS

TODAY there probably is not a single industry employing over 2,000 workmen that does not have in operation a thorough system of health maintenance. Many industries with less than 1,000 employees have in the past few years inaugurated health services.

Twenty years ago, when industrial medicine and surgery were new specialties, a physician was retained in a few industries by the occasional large hearted or far sighted executive. This was in the nature of a quasicharitable endeavor. The physician entered such a service with a considerable handicap because of the antipathy of employees to any such endeavor directed toward them. Normal American workmen do not relish charitable efforts in their behalf either directly or indirectly applied.

The stage has long since passed when an industry feels in any way justified in maintaining a medical department for employees unless this department is able to give in increased efficiency a full return for every dollar expended on it. To be justifiable economically a medical department in an industry must add to the "work span" and the "life span" of the working force. I question whether any industry has a moral or ethical justification for engaging in works of charity toward its employees, and whether employees are in the long run benefited by such an endeavor.

The functions of the medical department in an industry can be divided into two major groups: (1) health maintenance, and (2) accident prevention and treatment, or industrial surgery.

Included in the first group of duties are:

1. Examination of new employees.
2. Supervision of health of the working force and preventive medical measures.
3. Industrial hygiene.
4. Nursing service.

New Employees Should Be Examined

The purpose of the examination of new employees is to determine whether the applicant's physical qualifications correspond to the physical requirements of the job. The modern conception of employment qualifications can be briefly expressed in the following equation: Physical qualifications + mental qualifications = job.

The present tendency is away from the old standard of flat rejection of applicants on physical grounds and toward a system of classification of workers according to the work which they are capable of doing. Industries have gradually come to see that wholesale rejection of applicants for work will in time build up a large class of permanently unemployed and socially dissatisfied people. We now know that such persons can be vocationally trained for work they are capable of doing and can be properly placed in a different occupation.

However, for the protection both of the man himself and his fellow employees, the industrial physician must reject such applications for work as fall into the following classes:

1. Where employment would be dangerous to the applicant himself, as instanced by (a) work about machinery by those with high grade defects of vision that cannot be sufficiently corrected by glasses; (b) employment about moving machinery or engine parts by epileptics who might have convulsions; (c) indoor activity for those with active pulmonary tuberculosis; (d) labor that would aggravate heart disease of certain types; (e) employment of persons with chronic, disabling diseases such as pernicious anemia, advanced diabetes or Bright's disease of certain severe types.

2. Where employment might endanger fellow workmen; this includes many of the above mentioned disabilities and also venereal and other contagious diseases.

3. Where the man's mental and physical makeup are such as to endanger property or life; this applies to men handling machinery or to those in control of hazardous operations or processes, such as metal casting or truck driving.

In small industries there is little chance for vocational placement, but in the larger industries it is often possible to study the man's handicap and place him in some other occupation than the one for which he applies, in which he will be a good workman in spite of his defects.

Applicants with such defects as those of vision, heart disease, hernia, varicose veins, flat feet and high blood pressure are employed in many industries with the understanding that their physical status will be checked up by a careful examination at stated intervals and that they will follow the advice of the industrial physician in securing proper treatment for their condition.

Many industries furnish new applicants with examinations by oculists and with proper glasses at cost. A few give employees dental care at the plant without charge or at a minimum fee. Many others lend the employee money to have necessary dental work done.

The periodic physical examination of employees is a "stock taking" of one of the great assets of the industry. The old and trained employee is a valuable machine and an expensive one to replace. It has been estimated that even the replacing of a messenger boy or an unskilled worker by a new one costs the industry several hundred dollars in time lost, in mistakes made and in neglect by fellow employees of their work in order to instruct the new man in the various rules or methods of the plant.

The treatment of disabling illness is of secondary importance to the industrial physician. When an employee requests a home pass for illness, he is examined and referred to his family physician for treatment. Those suffering from diseases of the eyes, ears, nose or throat are often referred to specialists.

On returning after an illness, the employee is again examined to see whether he is able to resume his duties. Sometimes he returns without being carefully examined by his family physician; sometimes he has not yet recovered and has to be sent home again for a period of convalescence. The conscientious employee often wants to return to work while he is still too weak. He may be anemic, following an infection; often his blood pressure is very low, following an exhaustive fever.

Common Causes of Absence from Work

Minor illnesses usually are treated at the plant and when a particular symptom is found to recur frequently a careful examination is made to ascertain and eliminate the cause. Thousands of cases of repeated headaches are thus studied yearly in industry. For many of these an examination of the eyes is given and glasses are prescribed; some are suffering from the ill effects of chronic constipation; some have rheumatic headaches from such foci of infection as abscessed teeth.

Painful menstruation is appropriately treated in the girls' rest room adjacent to the medical department. Much disability from work is thus eliminated by keeping patients in a rest room for an hour or so who otherwise would stay home from work for an entire day. Often when a careful examination is made of such cases and a proper hygienic régime recommended, the girls get complete relief. In other cases, of course, there has been some definite organic change, making operation advisable.

To the department manager, repeated absences from work of a day or so at a time are more trying and disorganizing to his routine than cases of severe sickness, because for the former no provision can be made beforehand, whereas if a man is expected to be absent from work for several months his work can be definitely assigned to some one else.

Many studies have been made to learn the commonest causes of short disabilities. Tonsillitis undoubtedly stands foremost as a cause of brief illness among female employees. When a "tonsil survey" is made, the workers who have had repeated absences from this cause are called into the dispensary and examined. The economic loss and the health hazards of chronically infected tonsils are explained to them, the way in which the heart, kidneys and other organs are damaged by the chronic absorption of pus is carefully described, and by such missionary work many of them are persuaded to have bad tonsils removed.

The industrial physician has an unprecedented opportunity to study many grave diseases in their earliest phases. Often incipient toxic goiter, early heart and kidney diseases, and nervous disorders are discovered at the industrial dispensary during an examination for trivial complaints. By the early application of the proper dietary and hygienic régime, serious consequences can be prevented.

Extra Lunches for Underweight

For several years past a system of feeding school children who are below par physically and mentally and whose weight is below the proper standard for their height and age has been in vogue in a number of public schools in America and England. The same sort of work has been inaugurated in some industries and is known as preventive feeding, because it is felt that employees who are below normal in weight and strength are more susceptible to various illnesses.

Underweight employees in the working force are asked to come to the medical dispensary twice a day, generally about 10 a. m. and 4 p. m., where they are given a glass of malted milk reinforced by certain other concentrated foods of high caloric value. An exact weekly record of their weight increase is kept.

Photos by National Commercial Film

One corner of the medical dispensary in a large Chicago bank

Employers have learned that a woman's restroom pays in dollars and cents. Often an hour or two in the restroom suffices as well as a day at home. The photograph shows the restroom for women at the Illinois Merchants Bank, Chicago, at the noon hour.

In a group of underweight persons in two Chicago banks that maintained medical departments, there has been an average gain of 10 pounds in three months; one person gained 18 pounds and none gained less than five. There is little doubt that getting a person back to normal weight is one of the best ways of insuring him against the various infections and types of ill health that result directly or indirectly from the lowering of vitality and general resistance.

Industrial Hygiene

Among the general health hazards of industry are those resulting from improper lighting and ventilation. For the past decade various engineering societies have studied industrial lighting and ventilation. The American Engineering Standards Committee has formulated the American industrial lighting code. Similarly prepared codes for regulation of ventilation and exhaust systems have been published by the National Safety Council and these are being universally adopted by the large industries. It is the joint work of the industrial physician and safety engineer to see that these regulations are in effect in a particular industry.

Another group of health hazards from which the physician must protect the employee is that of industrial poisoning by chemicals, such as lead, phosphorus, arsenic, copper and poisonous fumes from acids, oxides of nitrogen and sulphur. In most industrial states the physician's duties in this respect are defined by law. He must periodically examine all employees exposed to the hazard of poisoning by these specific chemicals, and must treat any case so found. All cases must be reported to the state department of factory inspection, which investigates the cause and means by which future cases can be prevented in the particular industry.

There are several health hazards not so easily defined nor so specific as the above that nevertheless are definitely injurious to the worker's health and must be investigated by the physician. An example is the effect of monotonous or repetitive work, like that involved in running a punch press or feeding a machine with a certain number of pieces of material which must be cut or wrapped at a definite rate per minute.

The reaction of the personality to monotonous occupation is infinitely variable. Some individuals perform monotonous labor for years without apparent injurious effect. Others develop functional nervous disorders, such as hysteria and neurasthenia. Many female workers do not stand repetitive work at all well. They are constantly appearing in the industrial dispensary or the physician's office with trivial complaints of all sorts, and a careful history of the case coupled with physical examination enables him to arrive at a medicosocial or medico-industrial diagnosis.

Sometimes the remedy involves change of occupation; sometimes a variation of work from week to week, one week at the tiresome machine and one week at some other occupation. Recreation periods and games at the noon hour or interdepartmental tennis or baseball tournaments sometimes supply the needed diversion.

The problems of fatigue are related both to the health and the industrial efficiency of the employee. Sometimes home conditions, such as lack of sanitary living quarters, proper food and healthy recreation after working hours, are more vital factors than long hours at work or tedious occupations.

Helping the Discontented Worker

In many instances it devolves upon the physician to remove mental causes of inefficiency and to study and prescribe for the inefficient, dissatisfied and discontented employee. The worker's environment as far as its effect on his industrial life goes must be considered both in and out of working hours. Mental and bodily health are not promoted or physical efficiency maintained by working at long hours in poorly

lighted, dirty and ill ventilated workrooms. Employers quite generally recognize this today. In many factories the physician has been largely responsible for the establishment of recreation facilities, attractive eating places, sufficient length of lunch hour for a little relaxation after the meal, and music rooms and libraries. All this is good business. It actually has a demonstrable return in production.

One hears much about the effects of alcoholism in causing curtailment of production in industry, but there is an important chapter not yet written in sociology dealing with the industrial cause of alcoholism. Monotonous labor, lack of incentive for ambition or hope of advancement, long hours leaving little time for daylight recreation, and drab surroundings outside the factory sometimes leave little opportunity for the natural stimulation of interest in healthy relaxation, and the occasional alcoholic spree is the worker's only relief from his monotonous life.

The physician in industry who studies the psychology of the discontented and restless worker from an occupational standpoint often finds a worker who is poorly placed and helps him to a better selection of a job, advises him as to proper home environment, or encourages him to take up a hobby that will take his mind from his fancied grievances.

In this sort of work the industrial nurse is indispensable to the physician. As a visiting nurse she calls on the employee when he is ill; as a dispensary nurse she hears of his many complaints and anxieties in a more confidential relation than does a physician. Her opportunity to aid the employee is limited only by the limitation of her personality. Industrial nursing is a very popular field for graduate nurses.

No surgical service for an industry is complete if it does not provide the means of reducing the number of accidents and preventing their occurrence by all possible means. After safety guards have been applied to all moving machinery, all elevators equipped with emergency and automatic stop devices, open windows barred, thoroughfares made safe for walking, and all possible mechanical protections installed, accidents will still continue to occur.

The medical dispensary of the Illinois Merchants Bank, Chicago, serves more than 1,700 employees.

The National Safety Council has systematized the methods of teaching safety as a positive doctrine of careful habits, not merely as an avoidance of risk. As discipline is the habit of obedience and takes time and effort to instil into soldiers, so safety is the habit of carefulness and requires systematic training to instil into the industrial army. But it can be done.

The work of rendering adequate first aid has been standardized in industry. In hazardous types of employment, a group of employees in every department is especially trained in the routine methods of (1) combating shock by stimulation or application of heat; (2) controlling hemorrhage either by direct pressure or the application of the tourniquet; (3) relieving asphyxia by the Shafer prone pressure maneuvers, and (4) properly mobilizing injured parts by emergency splints, so that further injury is not caused during the trip to the surgeon's office or hospital.

Prior to the war experience of our industrial surgeons, many of them had devoted the greater part of their energy to standardizing methods of treating industrial injuries and had, in large part, neglected many of the newer methods of great assistance in functional and occupational restoration of the injured individual. The reconstruction and rehabilitation work for the soldiers stimulated industrial surgeons to the intensive study of such methods in reclaiming the useful lives from the industrial scrapheap.

Statistics show that annually about 76,000 industrial workers in this country suffer the loss of members, and at least 200,000 are otherwise permanently disabled in some way, as the result of industrial accidents. While the patient with the future handicap from accident is still in the hospital, vocational training for some new occupation can be begun. When this is done in an especially equipped workroom in the hospital, it is called occupational therapy.

The restoration of the functions of disabled limbs by the actual use of the hammer, saw or other tools has been found far superior to the use of any artificial apparatus. Replacement of the injured in industry at a new job requires the cooperation of the industrial surgeon, the employment officer and the manager or foreman.

In a few industrial states a state program for the rehabilitation and occupational retraining of those handicapped by industrial accidents has been inaugurated. This marks the beginning of a new epoch in the care of the disabled.

Mental Handicaps of Childhood

DOUGLAS A. THOM

The neurotic child, or the child handicapped by undesirable habits and personality defects, becomes a family burden, an economic hazard, and a social liability.

NEUROTIC children are of two distinct types, constitutional and acquired. The constitutionally neurotic child is one who has reacted from birth to both internal and external stimuli in an abnormal or exaggerated manner—a reaction that has resulted in conduct sufficiently different from that manifested by other children of the same age and racial and social status as to attract attention and adverse criticism.

This abnormal behavior is frequently expressed in terms of nervousness or neurotic symptoms and may be physical (neurotic vomiting), mental (fears), or social (stealing) in its manifestation.

In these children all sensations from without, such as heat, light, cold, odors and noise, register with an abnormal acuteness. They have no tolerance of pain; slight indiscretions in diet are apt to produce severe gastro-intestinal upsets, often associated with skin reactions (hives being a common example). Marked emotional disturbances are brought about by changes in environment and by new experiences. Neurotic children appear to be sensitized to fear. It is this type of youngster that is likely to develop twitching of the muscles of the face, neck and shoulders, blinking of the eyelids, and twisting of the upper lip and nose. Chorea, or what is commonly known as St. Vitus' dance, and convulsions are frequently manifestations of the unstable nervous system that is the heritage of the neurotic child.

From the individual's standpoint, heredity should neither be ignored nor yielded to as inevitably fixing our destiny.

Fortunately the great majority of neurotic children are not the product of an irreparable past over which they have no control. They are simply the result of the environment in which they are being reared.

The child's mental life is characterized by extreme plasticity and marked suggestibility, with a strong, instinctive tendency to imitate all that he sees and hears, and to respond sympathetically to the feeling tone of those with whom he comes in contact. He has in addition an inherent desire for the approbation of others.

Bearing in mind these characteristics, does it seem strange that the child is molded to a large extent by the personalities and conditions that surround his early life?

Let us consider for a moment some of the factors in the environment of the child that account for such personality defects as shyness, jealousy, cruelty, pugnacity and stubbornness. Why does he have temper tantrums? What gives him that feeling of inferiority and lack of self-confidence? Why is he so self-centered, indulging continually in day dreams? All these undesirable traits occur very early in the life of the child and can be better understood and more easily corrected at the third year than they can in adolescent or adult life.

Fault Probably with Parents

Some one has said: "To evolve parents fit for children to live with is the chief business of society." Parents must first have in mind some such conception of the mental life of the child as I have already outlined. They must appreciate the fact that they cannot administer discipline in a stern, rigid, uncompromising manner one day, in the heat of temper and uncontrolled emotion the next, and then, perhaps, on another occasion entirely overlook that which previously evoked their anger. How is the child to learn by experience if discipline is handed out in such an erratic manner?

Quite as unfortunate as the ill-disciplined child is the child who finds himself the chief amusement of an oversolicitous mother who refuses to allow her sons or daughters to emancipate themselves from maternal dependency. This child is being denied one of the fundamental rights by a selfish, self-centered parent. In both instances the child's normal development is being hampered by lack of understanding on the part of the parents.

Numerous other difficulties over which we have little or no control at present must be considered. Economic situations arise that demand the mother's contribution to the support of the household. Often this means employment at night for six or eight hours. Such a mother, worn and wearied by toil, has little of good to contribute to the mental atmosphere of her home.

Neither can we expect too much from mentally deficient parents, especially when they are emotionally unstable. Such a parent soon finds the problem of being a wife and a mother quite beyond her limitations, willing as she may be.

Household situations get very complicated at times. Personalities come into conflict with one another, no one seems to be in authority, the child's patronage is sought by both parents, and he soon learns to exploit this situation to his

advantage. This divided household is the workshop from which come unrestrained and undisciplined individuals, lacking in the usual inhibitions so essential to desirable social conduct. It is this type of child that later fills our reformatories, jails and prisons.

The mental atmosphere of the home cannot but be reflected in the personality of the child. In the constitutionally neurotic child it can do much to perpetuate and exaggerate an already existing condition or it can be equally potent in bringing about stability where instability would otherwise prevail.

The question now arises—what is being done and what can be done to help this group of unstable children who are developing undesirable habits and personality defects, at a time when these defects and habits can best be understood and corrected and before they have become woven into the fabric of the individual's life?

Boston Has Six Habit Clinics

The city of Boston, so far as I know, has the only clinics in this or any other country that are solely interested in the mental life of children of preschool age. These habit clinics are situated in six different city districts and are held one day each week.

They render what might be called a neighborhood service, making it just as convenient as possible for the mothers and children to use the clinics. Each unit has a psychiatrist trained and particularly interested in children's problems. There is a social worker specially trained in the handling of mental problems and a psychologist experienced in dealing with children. Nurses and dietitians are available from the medical organization of which the habit clinics are a part, for it is absolutely essential that all physical causes for undesirable habits be found and eliminated before the child enters the habit clinic.

The work at the clinics divides itself quite naturally into four distinct parts:

1. Study of environmental conditions and the personalities with which the child comes in contact.
2. Study of the mental equipment of the child—his mental age in relation to his chronological age, his opportunities for development, and the intellectual equipment of the parents.
3. Study of the personality of the child.
4. Treatment
   (a) Medical and psychological.
   (b) Social.

Before making any plan for treatment, it is necessary to know exactly what the environmental conditions are. Neurotic symptoms, undesirable habits and personality defects are invariably a result of the reaction between the individual and his environment.

All the information possible regarding the personalities with which the child comes in contact and also an accurate idea of their intellectual equipments are essential. Whenever feasible, intelligence tests are given to the parents as well as to the child. This is necessary before outlining the plan of treatment, as it is quite futile to try to put in operation in a household an elaborate plan when we have to deal with a mother who is low grade mentally.

Make Study of Child's Personality

The next, and perhaps the most important, step in the examination is the personality study of the child. It is here that the habit clinic attempts to get an understanding of the difficulties the child is experiencing and their relation to his mental equipment and to the experiences to which he has been subjected. This means an intensive study of the entire life of the child, as conduct can only be interpreted with all the foregoing information at hand.

One often finds that the personality defect or undesirable conduct had its origin in some experience or series of experiences which antedate the symptoms by many months. The cause may long since have been removed but the emotion attached to the experience still remains.

After the various investigations and examinations have been made, a conference with the various workers is then called and a plan of treatment outlined. The treatment always involves continued contact with the child for periods varying from one month to one year. During this time instruction is given to the parents and this enables them to have a better understanding of the child. If the child is in a nursery school the teacher is informed of the findings and encouraged to cooperate in the plan of treatment. So far as possible, all the undesirable environmental conditions are eliminated or modified as circumstances permit.

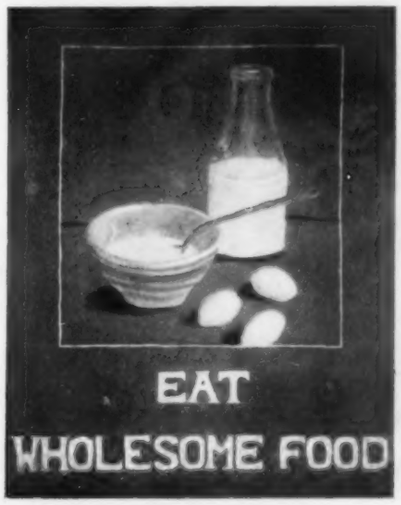
Frequently it is necessary to call upon other agencies to assist in the rehabilitation of the child by relieving the economic stress in the home or, perhaps, by providing for a temporary placing-out of the child, when economic conditions at home are such that results could not be expected if he remained. Whatever the treatment may involve, it must always include the entire family and not the child alone.

There is, indeed, much to learn about the means and methods that will help in altering undesirable habits and personality defects in children. It is, however, gratifying that the habit clinic idea has been accepted by the leading private health organization in Boston, by the health commissioner of the city, and by the division of mental hygiene which has to do with the preventive work relating to mental diseases in the state of Massachusetts.

A crying demand for such clinics exists in every city in the country, and plans are already under way for their organization in various cities from the Atlantic to the Pacific coast.

An Exhibit of Health Posters Submitted in Hygeia Contest

Gertrude Mrazek, South High School, Cleveland.

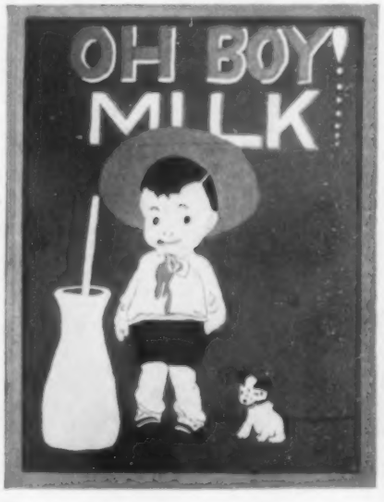


Dorothy Planck, Bloomington High School, Bloomington, Ind.

Miriam McKinnil, Minneapolis.

Dorothy Bliss, Schenectady High School, Schenectady, N. Y.

Lorraine Stark, Deerfield Shields High School, Highland Park, Ill.



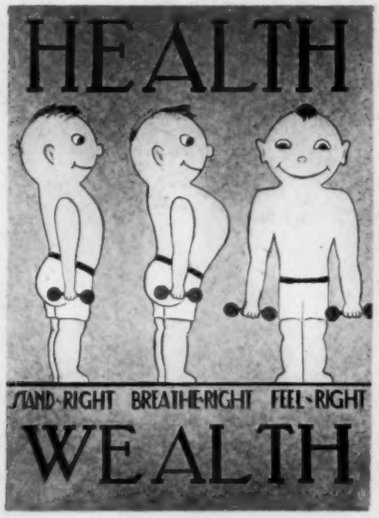
Irene Bowling, Reedley Joint Union High School, Reedley, Calif.

Ida Bergh, William Penn High School, Philadelphia.

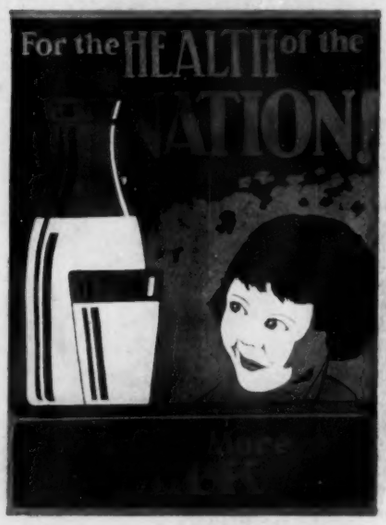
Scaisbrooke Abbott, E. C. Gales High School, Lynchburg, Va.

Alma Essex, McKinley Manual Training High School, Washington, D. C.

Nancy Tucker, Central High School, Houston, Texas.



Margaret E. Webb, Central High School, Oklahoma City, Okla.



Franklin Kahn, Frankford High School, Philadelphia.

John Engel, Central High School, St. Louis.

Charles Kraaiz, Lakewood High School, Lakewood, Ohio.

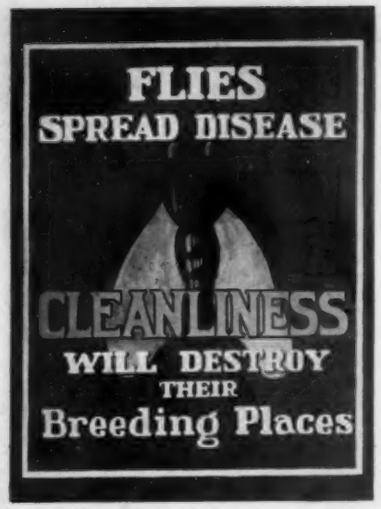
Harriet C. Benson, Holyoke High School, Holyoke, Mass.

Carol Sheisholtz, Glenville High School, Cleveland.

Hazel Searfe, McKinley High School, Washington, D. C.

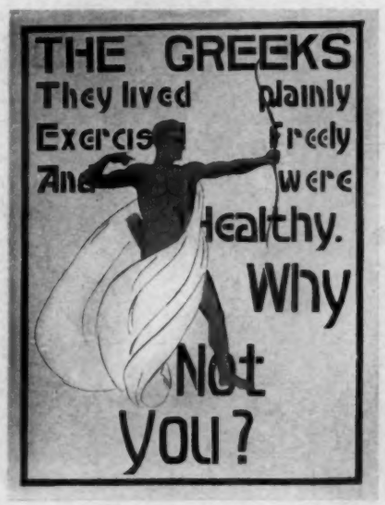
Donald Kelso, Oak Park and River Forest High School, Oak Park, Ill.

Dick Albert, Riverside High School, Milwaukee.



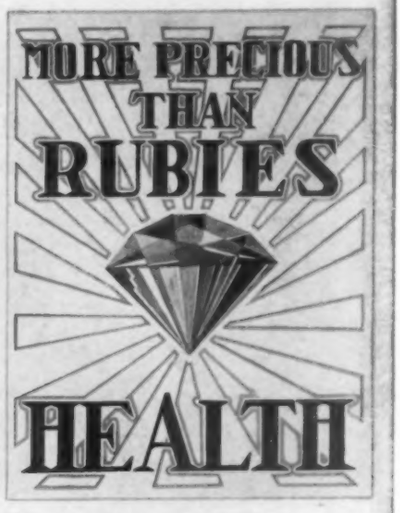
Gerald Murphy, West New York High School, West New York, N. J.

Patrice Shockey, Oak Park and River Forest High School, Oak Park, Ill.



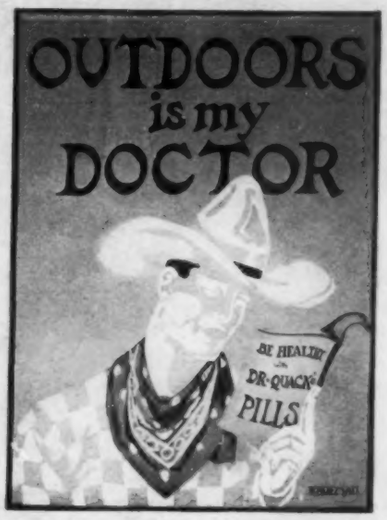
Robert Call, Senior High School, New Castle, Pa.

Helen Carnego, Rochester High School, Rochester, N. Y.



Harry Darrah, Peabody High School, Pittsburgh.

D. Taylor, West Chester High School, Malvern, Pa.

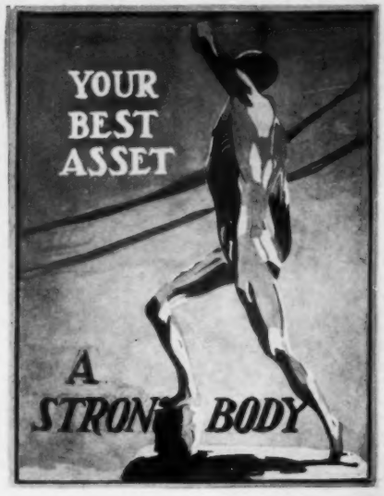


Wayne Kaufman, Lakewood High School, Lakewood, Ohio.

Harriet DeLong, Schenectady High School, Schenectady, N. Y.

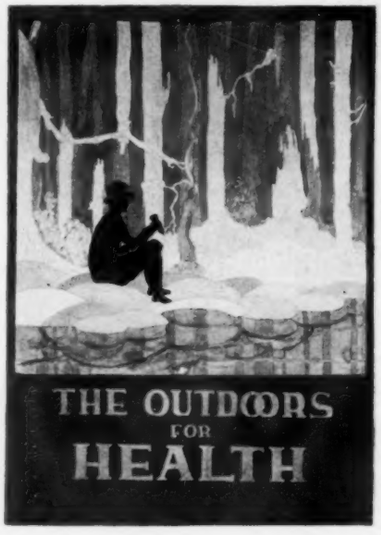
Mary B. Chenney, Peabody High School, Pittsburgh.

Harold Edwards, Washington High School, Sioux Falls, S. D.



Raymond Elms, Lake View High School, Chicago.

Leah Pennan, Sioux City High School, Sioux City, Ia.



Annette Wilkins, Riverside High School, Milwaukee.

Nettie Spitzer, Yonkers High School, Yonkers, N. Y.

Mildred Wood, Deerfield Shields High School, Highland Park, Ill.

Alfred Ross, Washington High School, Sioux Falls, S. D.

Lucile Estabrook, Schenectady High School, Schenectady, N. Y.

Patent Medicine in China

CHI-CHEN WANG

WHILE both Western and Chinese doctors—many of them graduates of medical schools in Europe and America—are trying to combat ignorance with modern medical science, patent medicine * manufacturers of Europe and America are exploiting that ignorance with their wares. The doctors are making some headway, but the patent medicine manufacturers are leading in the race.

The prosperity of patent medicine manufacturers may be gleaned from the large amount of advertising space in newspapers and magazines bought by drug stores handling patent medicines. A survey of several issues of *Shun Pao,* the oldest and largest Chinese newspaper in Shanghai, reveals the startling fact that over one third of its total advertising space is bought by patent medicine manufacturers or their agents.

The average number of such advertisements is about fifty per issue; they exalt the virtues of some hundred different kinds of drugs that are calculated to cure all kinds of diseases. Some of the advertisements are small and consist only of a few inches of advertising space, but many occupy two columns or blaze their message across a half-page or even a full-page expanse.

The gullible reader needs no medical counselor. In the pages of the newspaper he will find cures for all diseases, known and unknown, that he thinks he may be afflicted with; if he has no actual ailment, he will benefit by taking Dr. So and So's tonic anyway.

Use Power of Suggestion

As the most successful patent medicine venders are agents of patent medicine manufacturers of Europe and America, they are all well versed in the art of advertising. They are the largest space buyers and believe in advertising consistently. It has already been said that they fill one third of the advertising columns of representative Chinese newspapers, and in some of the provincial papers, which have a limited

"Backache plagues me," say the large Chinese ideographs below the picture of the sufferer. Dr. Doan's kidney pills advertisements are familiar to every reader of Chinese newspapers and magazines.

circulation and hence do not have very much advertising, the percentage of patent medicine advertisements is even larger. Some of these papers derive practically all of their advertising revenue from nostrum venders, for Chinese merchants as a whole have not yet learned to extend their business by advertising methods, and Chinese newspapers cannot afford to turn down space buyers.

Patent medicine concerns really introduced the art of advertising into China. With their striking illustrations and their striking claims they have lured many victims. Of late, since competition has become keener, the more enterprising have resorted to coupons and no-money-in-advance methods; others have gone so far as to offer free trial treatments. The American public is familiar with such inducements and is wary about extravagant claims, but to the Chinese public such inducements seem true.

The House of Williams

An eminent example of successful patent medicine concerns is known in China as Dr. Williams' Medicine Store. For over twenty years this company has been advertising in China, and there is hardly a newspaper or magazine in the country that does not carry its false message of health and prosperity.

I first came across this concern about fifteen years ago when my mother, afflicted with ailments more imaginary than real, succumbed to the lures of the advertisements of the House of Williams. Its Pink Pills for Pale People were fortunately discarded in time, for my mother became aware that the medicine was not doing her any good but rather was harming her.

If we are to believe the claims of this philanthropic concern, it is the apostle of public health and the well-wisher for a stronger and better

* The term "patent medicine" is employed in this article in its popular sense and denotes not only medicines that are actually "patented," but proprietary remedies as well.

China. A recent advertisement, translated in part, reads as follows:

EVERYBODY NEEDS THIS FREE BOOKLET; SEND FOR IT TODAY

What China needs most today are citizens who are fit physically, morally and mentally. This booklet is published in Shanghai and aims to build up the health of the youth and to develop their physique. Not only the youth and the middle-aged can improve their health and efficiency but older persons can find secrets of rejuvenating themselves in this booklet. By the methods set forth in the booklet the age of usefulness of men is lengthened and health and happiness are increased. This booklet deals exhaustively with the physiology of man, but it does not slight the personal hygiene of women and children.

The advertisement goes on to tell how health and strength can be secured through a system of exercises written by a famous boxing instructor. A coupon is provided for the convenience of the reader, and there seems to be no harm in getting the information. On the surface, the proposition is fair. There is nothing said about the pills, only the free booklet.

The coupon is sent and in due time the booklet arrives. The reader finds that it does contain a system of exercises, but he also finds that side by side with the general

Pink Pills for Pale People and Baby's Own are Dr. Williams' remedies much advertised in the Chinese press.

treatise on health there are testimonials sounding the highest praise for the various pills which this institution of health handles exclusively.

The reader also learns that in order to get the full benefit of the exercises, they should be supplemented by Dr. Williams' pills. If the inquirer has some ailment, he should take the pills by all means. If he is not ill at the time, he will prevent all possible indisposition by taking the pills occasionally. And, true to the claim of the advertisement, women and children are not slighted, for Dr. Williams' Pink Pills are especially recommended for women, Dr. Williams' "baby's own" tablets for children, and Dr. Williams' Pinkettes for every one in the family.

For the benefit of those who find it difficult to discover their ailments, a number of symptoms are listed. These symptoms are so general and inclusive that even the most healthy cannot help discovering one or more that will apply to him. So in the end he sends for at least one of the three remedies handled by Dr. Williams' Medicine Store, if not all of them.

The House of Doan

Parallel to the growth and prosperity of the House of Williams is the House of Doan, which also has its headquarters in Shanghai. Every reader of newspapers and magazines is familiar with the picture of a man with his hands on his hips and his back bent with pain. Large display Chinese ideographs tell him that the trouble with the man is that he has weak kidneys, the cause of a multitude of ills. The reader is urged to look after the matter of his own kidneys immediately lest more serious diseases develop. Then follows a list of sixteen distinct diseases that Dr. Doan's kidney pills will cure.

Kidney pills are the forte of the House of Doan but they have other remedies unsurpassed in curative qualities. There are the tonic pills for weak people, an ointment for all kinds of skin diseases and a liniment for rheumatism.

The products of concerns like Williams and Doan are not only to be obtained from their headquarters in Shanghai by mail, but they can be bought at the leading drug stores all over the country. The shelves of the Chinese dispenser of patent medicines are replete with all kinds of pills and other remedies, imported and homemade. These quack remedies have wormed out a place as important as that gained by western doctors after years of assiduous labor. The latter were prompted by a spirit of service and of science while the former were prompted purely by the commercial gain.

In their advertising methods, the art of the English nostrum venders in China rivals that of their American cousins. An English concern newly entering the nostrum field in China presented its wares to the Chinese public in a most

convincing manner. Its advertisements, occupying from one fourth to a full newspaper page, appeared in the leading newspapers in the country. Each day there was printed an entirely different set of advertisements telling the public why two cures, a tonic and a kidney pill, should be used.

Creating a Demand for Pills

One of these advertisements announced a reward of $10,000 to any person who could discover a better remedy for kidney disorders than that contained in De Witt's Kidney Pills, a "blue medical element that has been acclaimed by all the noted doctors of the world as the most effective, and at the same time the most harmless, remedy for kidney disorders."

Along with the announcement were the pictures of four persons who had been cured by the pills. One was cured after two bottles and another felt improvement in ten hours. Of course, there was the coupon that entitled the sender to a sample bottle.

Elsewhere in the same issue of the newspaper was found a neat advertisement praising the wonderful effects of the Tiger pills of the same concern. Under the pictures of three beneficiaries of these wonderful pills were testimonials vouchsafing that Tiger pills had helped them. Following these three specific instances, the notice went on to say that thousands of Chinese men, women and children, young and old, had proved that the Tiger pills were sure remedies for a multitude of ills. Not contented with a list of nineteen diseases that the Tiger pills could cure, the advertisement concluded with a sweeping and all-inclusive "etc."

Prospective victims are approached from all possible angles. Young maidens are appealed to by assuring them that the Tiger pills, by stimulating and increasing the blood supply, will enhance beauty. Tired business men are told that the Tiger pills will just give them enough tonic and keep them in trim for business competition. Students learn that they will be able to do better in school if they take some pills occasionally, for the tonic effect of the pills will make them feel like working.

And so on day after day the people are hypnotized into believing that they are not doing justice to themselves until they take Tiger pills and make themselves into man-tigers.

Science Enlisted in the Cause

Nearly all the advertisers of patent medicine claim that their wares are the results of scientific research. Some well-known theory of physiology is stated as a major premise, the claim that the particular medicine advertised is especially made with that theory in view is advanced as the minor premise, and the inevitable conclusion is that every one should take it.

"Ten thousand dollars reward for a better remedy for kidney disorders than the 'blue medical element' found in De Witt's kidney pills." The four pictures are of beneficiaries. Below at the left hand corner is the coupon entitling the sender to a free trial bottle.

The following advertisement appeared in a recent issue of the *Shun Pao:*

The life of man depends upon cells, such as brain cells, blood cells and the like. They differ in kind and vary in size and can only be seen with the aid of powerful microscopes.

There are about 150 billion cells in the human body. Every cell has an individual life of its own and it would lose its function if clogged up by impurities. One unhealthy cell leads to another until millions and millions become useless. As the cells lose their function the human body becomes weakened and gradually the whole organism dies.

Hundred-Year-Tablets nourish the 150 billion cells of the human body, strengthen them and prevent impurities from clogging them up. They keep up the multiplication of the cells and keep the body in perfect health. One's appetite and vitality will never decrease and one will always enjoy the full vigor of youth.

Thus the cell theory is exploited. The theory has become a fact, and many with a superficial knowledge of science might be led to believe the rest of the advertisement simply because the cell part of it is sound.

Another store, in advertising a Hemoglobin Byla begins with the indisputable fact that

blood is an all-important factor in one's health, and goes on to say that the manufacturers of the Hemoglobin Byla discovered a process of extracting that wonderful fluid from the blood of healthy cows. This alone ought to be convincing enough for one who is ignorant of the fundamental principles of biology, but if there is still any doubt lingering in the mind of the reader, it vanishes when he is assured that it has been used extensively in Europe for twenty years, and has been endorsed by all the prominent doctors.

Nothing is beyond the curative powers of patent medicine. Another advertisement reads:

> If you want to do new things you must have new ideas. If you want to have new ideas you must have new brains. Do you think that weak-minded and sluggish people can occupy superior positions in society? Do you think that clever and competent people can be kept down in the ladder of success?
>
> By taking New Brain Tablets, sluggish minds are turned into clever minds; careless minds become shrewd minds; muddled brains become clear brains; and forgetfulness is replaced with a good memory. Our new brain tablets are made of chemically pure phosphorus and other ingredients. They go straight into the brain and become brain matter. They strengthen the mind and improve mental efficiency. Directly they benefit the users and indirectly they strengthen the country. Buy a bottle immediately, patriotic youths!

At last brains in tablet form! Nothing is impossible with the aid of patent medicine. It should be noticed that again a scientific theory is exploited, this time the theory that phosphorus is beneficial to the brain is surreptitiously borrowed and exploited. It may sound plausible to those who know just enough about science to think that nothing is impossible with science—and so victims fall for the tablets.

2,000 Years of Chinese Pills

Patent medicines are not new in China. The pills that come from the West are new only in their packing and in the advertising campaigns. For over 2,000 years or more the Chinese have been making and swallowing pills of all kinds, purported to cure all kinds of diseases.

There were those who believe that an elixir of youth could be concocted from certain kinds of herbs mixed in the right proportions and baked in the right way. Some of them came to unhappy ends, but the faithful disciples consoled themselves by the thought that the master magician might have discovered the elixir and that his soul had left the body to wander the universe as an immortal.

These aspirants after immortality through pills were, however, exceptionally ambitious souls. Other pill makers had humbler ambitions and only aspired to find cures for the innumerable ills with which human beings have always been afflicted. Of these there have been legion. Every Chinese doctor-pharmacist is a pill manufacturer. Besides making the standard pills found in the prescription books, sometimes doctors make new pills according to their own pet theories. If one discovers an especially successful cure, he keeps it as a secret and banks on it.

An outstanding example of successful Chinese houses is the Tung Jen Tang of Peking. For two centuries this store has been making over a hundred kinds of pills. The company is widely known and its products are distributed all over China, although it has no agencies. Its fame is such that visitors to Peking from other parts of China make it a point to buy a supply of such pills and bring them home as presents to their friends and relatives. In this way Tung Jen Tang is able to distribute its products all over China even to the remotest parts although it has only the one store in Peking.

Centuries of accumulated experience have given the House of Tung Jen an undisputed place in the realm of pills, ointments and salves. Its recipes are carefully guarded as family secrets and the utmost precaution is taken that none of them leaks out. It is for this reason more than anything else that the House of Tung Jen never opened any branch stores in Peking or other parts of China. Expanded business would rob the distinction that Tung Jen Tang enjoys and make it difficult to keep its secrets.

Protecting the United States from Disease

Early History of National Quarantine—Part I

H. R. CARTER

NATIONAL quarantine may be defined as the measures taken by a national health service to prevent the introduction of communicable diseases from abroad. In the United States by law it now includes measures to prevent the introduction of some diseases from one state into another, but at first the only ones guarded against were diseases from foreign countries.

The enforcement of national quarantine is now a relatively small proportion of the work done by the health service of any well-organized national health department. National quarantine was originally almost exclusively maritime quarantine, and was the beginning of the health service, so far as I know, of every European nation, exclusive of Switzerland, and of all the first states of our nation, because all of the old states bordered on the sea. From maritime quarantine were developed, usually not very rapidly, measures for the control or elimination of diseases already in the territory.

Even now maritime quarantine measured by the ill which it averts in proportion to expense (the measure of usefulness of any sanitary regulation) shows up certainly as well as some of the functions of the health service which are considered more important. The health organization of states without seacoasts was sometimes patterned after those of the older ones, and sometimes the newer states, guided by the mistakes of the older ones, were able early to introduce improved regulations.

The reason maritime quarantine came first is that men fear diseases with which they are unfamiliar much more than those just as dangerous which they know. One dies just as dead from tuberculosis or typhoid as from yellow fever or bubonic plague, but from the time of Grettir the strong even brave men have seemed to dread an "ill death not before known in these parts" more than death from a usual cause. I have heard, and I believe, the tale of a man who killed himself when yellow fever appeared in his town.

Yellow Fever Was Chief Foe

The first and until about 1893 the only quarantinable diseases for the United States were

Pier, disinfecting shed and quarantine steamer Foster at the U. S. quarantine station, Dry Tortugas, Florida

spotted fever, or typhus, yellow fever, smallpox, leprosy, and cholera. The first ceased to be a problem in the early part of the last century, although it has again come to the front. The last threatened only intermittently, and did not begin to do so until about the middle of the last century. Smallpox, though subject to maritime quarantine, was always on shore and was thus of minor importance from this standpoint. Leprosy was so rarely met that it was of no importance.

Yellow fever therefore practically determined the nature of maritime quarantine in America, for the whole seacoast in the early part of our national life, and for the coast south of Maryland for a very long time.

In the latter part of the eighteenth century there were several epidemics of yellow fever of virulent type in Philadelphia and one, at least, in New York; 4,041 deaths in Philadelphia in 1793, and 2,086 in New York in 1798. The outbreaks in Boston and Newbury Port, Massachusetts, were small, causing more panic than damage.

When water in pipes was generally introduced—in Philadelphia pipes had been extended even to Front Street in 1821 and 1822—stegomyia mosquitoes ceased breeding generally in these cities and since without them yellow fever could not spread even when introduced, there was little need of quarantine against it. The fact that these cities had become noninfectable to yellow fever was recognized by sanitarians long before the cause of their being so was known, although a number of utterly unnecessary measures against yellow fever were continued for many years.

Whatever view was or had been held as to the nature of yellow fever and its manner of spreading, in one belief there was agreement from Norfolk, Virginia, to Brownsville, Texas: yellow fever must not be introduced into a southern seaport in summer. The danger was not at intervals only, as for cholera; it was every summer, all summer, and along the whole of this coast. This quarantine was not only an inspection service to determine if an enemy were threatening, but also a defense against one that was actually attacking—and a number of times every summer. For this reason the history of quarantine against yellow fever is the early history of American quarantine, and that quarantine, therefore, will be described rather fully. This, too, was the first to be taken over by the Public Health Service, then the Marine Hospital Service.

President Jefferson Starts Service

The Marine Hospital Service, almost from its foundation in 1798 by Albert Gallatin in Jefferson's administration as the agency of the United States concerned with the health of men aboard vessels, cooperated with local health organizations in enforcing maritime quarantine at sea ports. It was, as now, under the Treasury Department and in conjunction with the Customs and Revenue Cutter Services, which gave both the authority and the physical force necessary to carry out the measures required.

The local organizations were generally and regularly under the municipality of the port of entry; although, especially just after and during epidemics, they were at times able to call to their assistance the police authority of their respective states. Few states had boards of health, and it was long before any of them undertook the maritime quarantine of their ports; some of them never did.

The assistance of the federal government increased as the need for steady, continuous, scientific, and, sometimes, expensive measures of quarantine increased. It was natural and right that this should be so. Whether or not the quarantine was efficient, affected not only the port of entry, but also in the case of some diseases much of the back country of the United States, some of which was not even in the same state. The cost of the measures was borne by the municipality; it was repaid by fees on vessels entering port, sometimes overpaid, sometimes not. In any case, the fees naturally increased the expensiveness of the port and to that extent lessened its commerce.

Boats to Refuge Stations for Disinfection

An important step was taken in 1880, when the National Board of Health, formed the previous year as a result of the great yellow fever epidemic of 1878, established three quarantine refuge stations, one in Chesapeake Bay, one off the coast of Georgia, one at Ship Island in the Gulf of Mexico. These were simply the well known lazarettos of Europe: anchorages, the more isolated the better, to which it was purposed that vessels infected with quarantinable diseases, particularly yellow fever, bound to any south Atlantic or Gulf port would be sent, to be detained there and the sick persons treated until free from infection. The vessels could enter ports of destination in safety. The plan was in its essentials good, but there were errors in administration and detail, and it did not fulfil the expectations.

These stations were turned over to the Public Health Service, then the Marine Hospital Service, in 1883. I took charge of the most important one, Ship Island, in the Mississippi Sound, early in 1888, relieving of this service Surgeon Murray, who had held it four or five years.

The plan of operation of the refuge station at Ship Island was as follows: Vessels from ports known to be infected, or suspected of infection, with yellow fever applied for entry at every port of entry from Galveston to Apalachicola. Certain of these vessels, those with yellow fever aboard, those that had had

yellow fever abroad, and those from particularly bad ports, such as Havana, Cienfuegos, Vera Cruz, Rio de Janeiro and Santos, in short, all believed to be infected with yellow fever, were turned back, usually by the pilots off the bar without consulting the quarantine officer, and sent to the refuge station. There they were detained and treated until believed to be free from infection, given a certificate to that effect, a "pratique" it is called, and allowed to enter their original port of destination.

Vessels from New Orleans, however, did not come to us, since Louisiana had already established her own refuge station for infected ships. Very obviously, the usefulness of the federal station depended, first, on its efficacy in ridding the vessels of infection, and, second, on the confidence its pratique received from the local quarantine officers of the ports to which these vessels reapplied for admission.

Lose Confidence in Stations

Unfortunately, during the second year of the administration of the National Board of Health, yellow fever had developed on some vessels, three that I now recall, after they had been treated at this station and given pratiques as free from infection. Naturally this brought its pratique into disrepute, and greatly impaired the usefulness of the station. Often a vessel sent there and declared free from infection would not be allowed entry by the local station of the port for which it had cleared. Hence, since there was nothing to be gained by coming to the refuge station, a number of vessels sent, or rather advised, to go there did not, but renounced their charters and went elsewhere.

Murray did much to overcome the lack of confidence in this refuge station, as much as was possible for him to do, for memory of a failure in yellow fever quarantine is a thing that lingers. After Murray left, I settled down to determine what to do, and how to do it.

It was quite evident that the station must be so conducted that there would be no contaminative communication to shore or to ships outside from the infected ones in quarantine, and that these ships should be so treated that when they left the station they would be free from infection. This must not only be so, but also it must be recognized universally, so that the station would not be considered a source of danger, and so that its pratique would be honored at the ports of destination of its clientele. Moreover, the station must be conducted with as little expense to the vessels as possible.

Safety was not enough. Unless the pratiques of the station were honored, the station would be of little value. At first it was necessary to carry out a great many measures in the treatment of ships that were not necessary to sanitation, but they were necessary for the admission to entry at the ports for which the ships had cleared. Later a campaign of education did away with these unnecessary steps. Lessening the expense for ships at quarantine was taken up primarily on the ground of common honesty, but ultimately it proved the lever by which the shipping merchants became staunch supporters of this station, and increased its clientele and usefulness.

The next problem was how to accomplish what seemed necessary. The methods in use at practically all quarantine stations in the Gulf were detention of the vessel and some type of disinfection. The disinfection of vessels had been begun only recently as a measure in yellow fever quarantine — in which America was far ahead of other countries. At some of the better stations it was regarded as of prime importance, in others, as an aid to detention.

Disinfection Methods Varied

The methods of disinfection varied greatly. At the Louisiana station, which was the leading one in the United States and, I presume, in the world at that time, much stress was laid on the use of superheated steam for clothing and bedding; the vessel and ballast were washed down and wetted thoroughly with bichloride of mercury solution and the closed spaces fumigated with burning sulphur.

At the station at Pensacola much stress was laid on the discharge of all ballast and a coat of whitewash for the hold. A dirty bilge, particularly stressed by French and British sanitarians, rotten wood—the *bête noire* of the navy —ballast, and clothing were especially feared, and at some of the least advanced stations "the atmosphere in the closed space of the ship" was still feared—with reason, as we later learned.

Fortunately, fumigation of closed spaces with sulphur was generally practiced and this was our salvation. The original idea was that it would "purify the atmosphere" of the ship. That was just what was wanted; it did purify the atmosphere by killing the stegomyia mosquitoes flying about. Fumigation with sulphur won scant approval from the bacteriologists. The tests of its germicidal power made by Sternberg and others had showed that as a germicide it was unreliable, and practically

For almost half a century H. R. Carter, assistant surgeon general of the U. S. Public Health Service, has been active in health work for the government.

One of his chief concerns has been the keeping of yellow fever out of the United States by means of quarantine. He proved the fact that the mosquito, after biting an infected person, cannot transmit the virus of yellow fever until from twelve to fourteen days.

This was a beginning in the victory over yellow fever and aided Walter Reed in the discovery of the stegomyia mosquito as the spreader of the disease.

of no value if the infecting organism was a spore bearer. I remember well the kindly, somewhat supercilious smiles which greeted my advocacy of this method before the Public Health Association in Charlestown in 1891. I had said that whether or not the fumigation were germicidal, I had seen three vessels on which yellow fever was being spread up to the time of the fumigation, and on which it ceased to be contracted immediately afterward.

Little Then Known of Yellow Fever

My idea of yellow fever was in no wise in advance of the general knowledge of the time. I believed that (1) it could be contracted by a susceptible man from an infected ship whether from the bilge, rotten wood, ballast, fabrics, or the atmosphere of its closed spaces I did not know, and therefore all of these must be held capable of doing so; that (2) a man who developed yellow fever in most places in the south infected his environment, from which, and probably from the sick man also, others could contract it; and (3) that a certain period must elapse between the date of a man's contracting yellow fever and its development, during which the infected man gave no evidence of his condition. This was the period of incubation of yellow fever.

Clearly, then, when the infection aboard a vessel was destroyed, detention of the vessel or of anything material aboard was not necessary; the vessel could be carried out of the quarantine at once, and with safety. Not so with its personnel, who presumably had been exposed to infection and might have contracted the fever and already be in the stage of incubation. They must be detained so that if they were going to develop yellow fever, they would do so in quarantine; obviously, their time of detention must cover the period of incubation of yellow fever and must date from the last possible exposure to infection; as obviously, that date for the crews of vessels was the date of the completion of disinfection.

This seems a simple principle, yet the rules for detention in no wise recognized it. They were as various or more so than the regulations for disinfection. The Louisiana station required a vessel to be disinfected and "detained five days from the date of her arrival in quarantine," unless she came from south of the equator, when three days was adjudged sufficient; Apalachicola required twenty-one days following arrival; one port required six weeks from arrival in quarantine—two days longer than the old Venetians. Some of the ports counted the time from the date the vessel had left the infected port, others from the last case of yellow fever aboard.

Pensacola and Mobile, taught by bitter experience, did not allow the entry of vessels that actually had had yellow fever aboard that year until after frost, no matter how long they waited or what measures of disinfection were used. I have cleared a vessel bound for Pensacola, which was able to take a cargo of lumber from a less distrustful port to Havana and return, going to quarantine a second time, and then to Pensacola after frost.

In none of the ports were the days of detention, "lay days in quarantine," counted from the completion of disinfection, that is, the last exposure to infection. It was from a disregard of this principle that yellow fever had developed aboard the vessels cleared in pratique from this station in 1881, one of which had been detained more than thirty days *before* disinfection. As simple as it is, this was the first time this principle of quarantine was written in English in any regulation in the United States or abroad. It was implied in a recommendation of Melier's in his excellent report of the epidemic of the Anne Marie in 1861 at St. Nazaire. The logical French mind could not miss a thing so obvious.

How Long to Detain Passengers

After the date from which detention was to be counted had been settled, the next question requiring decision was the duration of the detention. This made necessary the determination of the period of incubation of yellow fever. The books on yellow fever did not help much. According to them, the period of incubation varied from twenty-five days (Béranger-Féraud and Carlos Finlay) to twenty hours (Bemis). The methods used to determine it were faulty in principle.

For instance, if Mr. Blank developed yellow fever two days after leaving New Orleans, a virulently infected place, the writer would report this as a two-day incubation. Naturally he should have said, "not less than a two-day incubation." Another would report that because Mr. Blank came to New Orleans, a virulently infected place, and developed yellow fever on the twenty-fifth day, his was a twenty-five day incubation, instead of "not more than a twenty-five day incubation."

It was necessary then to learn the maximum period of incubation of yellow fever in man. If it took my lifetime, it would be well worth it. To release a vessel before the period of incubation had elapsed was a grave sanitary risk, to hold it after this time an unnecessary and, often, a grave hardship to her. We must know the minimum time necessary for the detention. In the meantime, Louisiana's rule of five days was adopted tentatively as the period of incubation.

The problem was finally worked out and the results published in 1900 and 1901, twelve and thirteen years after it was begun. In twelve cases of a single short exposure the period of incubation was found to be from three to six days. The period now accepted from data of

forty-four cases, thirty-two of which were experimental, is the same. The extremes were one case of incubation of two hours less than three days, and one of two hours more than six days.

Fortunately, we had reversed the Louisiana method and fumigated with sulphur for forty-eight hours before we washed down with bichloride of mercury solution, instead of afterward, so that our five days from "the completion of disinfection" were really seven days "from the last exposure to infection" since the stegomyia had been killed by the fumigation. The washing down with the bichloride was, of course, useless.

This part of the history would not have been given in such detail, except for what it led to, really the crown of the work on yellow fever. While this problem was being studied, another one presented itself, the solution of which was an important, possibly a determining, factor in the work of Walter Reed in demonstrating the conveyance of yellow fever by the stegomyia mosquito.

The life at the station was hard, the work onerous, but, as Murray had said, it was well worth doing; worth all that a man could put into it; more than any one man's life.

Station's Pratique Finally Accepted

To determine what the station's pratique should represent was one problem; to earn recognition for it was another problem. The opinion of the quarantine officers of the various Gulf ports as to the requisites for freeing a vessel from yellow fever were sought and as far as possible carried out. Quite often their requirements were judged to be insufficient. In such case, what I considered necessary was always done, and the nonessentials, if such were required, were added. These were not necessary for safety, but were necessary to enable the vessel to enter the port for which the pratique called.

Two pratiques were issued, a general pratique, on which was recorded the routine considered necessary for safety by the refuge station, although it included some things that we know now were not necessary, and a special pratique for the port of destination, on which was enumerated everything required for entry by that port. And, no matter how useless we knew some of the measures to be, every measure enumerated on the pratique had been carried out—and carried out in good faith and with thoroughness.

In a short time, the special pratique of this station was generally accepted, and finally the general pratique. Vessels, many that were not required to come, were coming to us by preference, because they were handled more quickly, more economically, and with less inconvenience than at most of the local stations. The refuge stations had established themselves in the confidence of sanitarians and shippers.

[Part II of Assistant Surgeon General Carter's story will appear in the February issue.]

Foster Parents for Homeless Children

ONE third of the homeless children in the United States under the care of public and private charitable agencies have found foster parents who have taken them into their own homes.

This is the estimate of the Children's Bureau of the U. S. Department of Labor, which has just issued an important report on "Foster Home Care for Dependent Children." This report, compiled under the direction of the social service division of the bureau, includes articles by eleven well known authorities on child welfare.

The growing emphasis during the past decade on the need of home care for the normal child has resulted, the bureau points out, in the effort, first, to prevent the break-up of the child's own home by giving mothers' pensions or public aid to children in their own homes, and second, to find a substitute home for the homeless child. Results are evident in the fact that forty-two states give public aid to dependent children in their own homes, that the number of children in foster homes has increased substantially and that the number of children in institutions has decreased.

Tentative figures place the number of children aided in their own homes at 127,000, the number in foster homes at 70,000, and the number in institutions at 125,000.

Foster home care for children who have no homes of their own or whose homes are unfit places for them to live in is not a new experiment, according to the Children's Bureau, which points out that this method, under various names, has been used for many centuries. However, modern standards of child care have vastly increased its value in promoting the welfare of dependent children.

The best public and private agencies carefully investigate every foster home before they place a child in it, and, after the child is placed, they exercise careful supervision so that the child's health, education, and happiness are safeguarded. Such agencies study the home conditions and the needs of the individual child so that the boy or girl whose own home may be saved through a mother's pension, or other forms of assistance, is not torn from his family, while the child who needs foster home or institutional care receives it.

HYGEIA

A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH

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Plain Facts About Health and Disease

THE NEW YEAR

IT HAS been the custom to greet the beginning of a new year with the wish that its duration be "happy and prosperous." Somehow it has always seemed to us that the word "healthful" should make the third member of a delightful trio! No doubt, for purposes of rhythm, it ought to be the first of the three. Our preference for this conclusion is that we are primarily interested in health, and that the second two members of the trio are dependent for their success on the practical achievement of the first. Without health there can be no happiness, and, in the long run, little prosperity. Indeed, one is reminded of the old couplet, which we shall not try to quote exactly:

> "He gave his health to win his wealth,
> And then while full of pain,
> He spent his wealth to get his health,
> And started out again."

It is the wish of HYGEIA, for each of its subscribers, that he have a healthful, happy and prosperous New Year. To the task of making the acquiring of health a pleasant and simple process, we dedicate its pages during the coming twelve months.

HEALTH NEWS OF THE MONTH

Transplanting Organs

Theodore Koppanyi, experimental physiologist in the University of Chicago, has just made public the results of attempts to transplant various organs. His name is familiar because of his experiments in transplanting the eye, which have been successful thus far only in the case of rats, and in such a small percentage as to offer little hope of any success in the human. His new experiments indicate that the mysterious organ known as the spleen may be transplanted from one animal to another with a certain degree of success.

Since the exact function of the spleen is not yet definitely known, Koppanyi's experiments may yield information on this point.

The spleen is believed to be responsible for changes associated with the manufacture and disintegration of the blood cells. By doubling or tripling the amount of spleen tissue in the organism, it may be possible to determine whether or not changes take place in the number or character of the blood cells, and just how the spleen acts in this connection.

Dr. Koppanyi has also performed certain experiments on the eyes of fishes which are of great interest. With J. F. Pearcy he has tunneled a passage in the skull of the fish so that the eye instead of projecting to the side, looks directly upward. When the eye was thus transplanted, the fish turned and swam on his side instead of in the usual upright posture.

These experiments indicate that the eye has a definite function in maintaining the equilibrium of the body. It has heretofore been generally believed that the function of balance was maintained primarily by the semicircular canals, which form a part of the interior mechanism of the ear.

It will be remembered that during the war aviators were tested primarily as to the integrity of these organs and their function. It was learned during the war that when aviators flew above the clouds and finally came out, they might find themselves flying partially on one side. In this way, they slipped readily into what was known as a "wing slip"; fatal accidents resulted from such causes. In other words, when the aviator was unable to orient himself in relation to the horizon by use of the visual sense, he could not depend on the knowledge coming to his brain from the semicircular canals alone for maintaining his balance. This would indicate the necessity for a device that would permit the aviator to determine whether or not he was flying with his machine properly horizontal.

Prof. Moellgaard's Tuberculosis Cure

During the past month, newspapers devoted considerable space to recent experiments performed by Prof. Moellgaard of Denmark in attempting to treat tuberculosis with a chemical substance

containing a certain amount of gold. The idea of gold as a therapeutic agent has always had a peculiar fascination for both the public and the physician. "Gold cures" have been available for practically every type of ill from which mankind may suffer. Unfortunately, none of these "cures" has thus far stood the test of scientific observation.

The method devised by Prof. Moellgaard has been tested on animals in his laboratories to a rather limited extent. His work has been conducted in a scientific manner, but it is impossible to state from the evidence thus far available whether or not it will have any real virtue in the treatment of tuberculosis.

Fortunately, Prof. Moellgaard is a scientist, and not inclined to commercialize or to propagate unduly an incomplete investigation. His method has been turned over for further study to other laboratories than his own, including that of the Medical Research Council of Great Britain. Until such independent investigations have been completed, the chemical will not be available for general use, and there will be no possibility of its exploitation by those commercially inclined.

Chlorin Treatment for Colds

Much has been said in the newspapers during the past year concerning the chlorin treatment for colds. It will be remembered that the method was first brought out by Drs. Vedder and Sawyer of the chemical warfare service of the United States Army. It was given a trial quite promptly by high officials of our government, including the President, and newspaper interviews brought it conspicuously to the attention of the public.

In the meantime, the devices for administering chlorin have been gradually improved and have been investigated by individual physicians and by public health officials throughout the country.

One of the first official reports to be made available is that of the department of health of New York City, which conducted a clinic for several months under the direction of Dr. L. I. Harris of its bureau of communicable diseases. As has been stated in the newspapers, the results of Dr. Harris' investigations were not such as to hold forth any great promise that the method has any real virtues. On the other hand, Dr. Vedder and several other physicians who have conducted investigations are inclined to believe that the method has in reality considerable virtue. The experiments as conducted in New York City were criticized by those favoring the method on the grounds of inadequate apparatus, and on the fact that they were conducted during the two hottest months of the year.

In any event, the public should know that the chlorin treatment of colds is best classified at the present time as an experimental method. In many cases it seems to yield relief, whereas in others the results do not appear to be at all satisfactory.

Before any method is adopted by medical science as a routine and as an established method, it must be demonstrated on a large scale that it has real virtue in a considerable percentage of cases; in fact, that it produces benefit to a greater degree than the methods previously used. No doubt, within the near future these facts will become available concerning the chlorin treatment of colds and other infections affecting the breathing tract.

M. F.

WHOOPING COUGH

MORE than 100,000 persons have died of whooping cough in the United States in the last ten years. One third of the cases and 90 per cent. of the deaths occur in children under the age of three. The mortality statistics in a fifty year period in the city of Hamburg was over 12 per cent. of all cases—which is four times the death rate of measles. About 25 per cent. of the deaths are due to tuberculosis, one of the most frequent and dreaded sequels of the disease.

The cause of whooping cough is now almost unanimously agreed to be a minute germ—the bacillus pertussis—first described by Bordet and Gengou. The finding of this germ in the sputum and a pertussis vaccine test are of value in making a diagnosis early in the disease. Some physicians have found the use of vaccines of decided value in protecting children who have been exposed to infection, but early isolation of patients ill with the disease continues to be the most effective measure for preventing its spread. It seems pretty definitely established that the disease is most infectious in the early, catarrhal stage, and that it is not infectious to others after this stage is passed. The protracted period of quarantine formerly insisted on for as long as the patient continued to whoop, is not necessary.

A review of recent investigations of whooping cough by Dr. Laurence Smith indicates that the cure of this disease is still a difficult matter. Vaccines are thought by many to be effective. Certain sedative drugs, among them ether, which is injected into the muscles or inhaled, have seemed useful in the hands of some phy-

sicians, while the x-ray, sunlight and washing out the stomach are used by others.

Since the cause of whooping cough is known, there is strong hope that further study will discover effective methods of preventing and curing the disease. Meanwhile, its serious nature and high mortality, especially among the very young, should be impressed on every parent.

Especially should children be protected by every possible means from exposure to the disease. J. M. D.

THE COCKROACH

PRACTICALLY every insect has been accused from time to time of some part in the transmission of disease. One of the earliest insects to be associated familiarly with man was the cockroach.

Paleontological studies indicate, as pointed out by Dr. E. S. Goodwin, that the cockroach has followed man ever since he first went down to the sea in ships. The first published description apparently was that in a book on insects printed in 1634, in which it was related that Sir Francis Drake found on capturing the *San Felipe* in 1587 that there were large numbers of this particular pest on board.

Heretofore, the cockroach has not been seriously indicted for any part in disease transmission, and even this most recent survey of its habits, including its diet and other physiologic functions, is unable to do more than to mention some of the facts that are still unknown.

The cockroach does not reach adult size until after two or three years, so that Dr. Goodwin characterizes it as the Methuselah among insects. The age at which it becomes sexually mature is apparently unknown. It secretes constantly an unmistakable, foul smelling secretion.

A cockroach eats anything and has no sanitary sense, since it disposes of its excretions everywhere. It is plentifully supplied with parasites, which live not only on its body but also within its intestinal tract. Therefore, while this pest has not been directly incriminated in the transmission of any single disease, it is clear that it has unrivaled opportunities for the dissemination of disease-producing germs.

Long before it became evident that various types of insects might have some part in spreading disease, attempts were made to eradicate the cockroach because of its obvious lack of esthetic value. Such methods included traps, heat, and both liquid and vaporous poisons. There appears to be no doubt that the proper use of hydrocyanic gas as is used for destroying rats on ships is equally efficient in destroying insects of various types, but so far as is known nothing short of this is sufficient for destroying the ova as well as the adult cockroach.

It is clear that many factors concerning the life and habits of this widely disseminated and exceedingly common insect are unknown, and, as Dr. Goodwin points out, these facts must be supplied if we are to govern properly its activities. Here is a field of research in which the entomologist and bacteriologist may work in unison. M. F.

COMFORT STATIONS

THE traveller in Europe cannot fail to observe the provision which is made in public places for attending the matter of disposal of body wastes. Comfort stations for the needs of individuals are to be found conveniently placed in the business sections of all cities of any size. The visitor from the United States may be startled by the often conspicuous locations of these conveniences. In American cities the lack of such accommodations or their inconspicuous location is perhaps a notable defect in city planning.

In pre-Volstead days, the corner saloon often provided the only facilities available for these purposes. Indeed, it is said that in some cities those engaged in the saloon business opposed any effort made to establish such stations elsewhere.

It seems curious that civic authorities have been slow to realize the importance of this matter, especially since the rapid development of automobile touring has greatly increased the number of transient visitors to cities and towns. Fortunately, some state health boards have brought about the necessary legislation to compel action.

In 1917 the legislature of Wisconsin passed an enabling act giving authority to the officials of any city or village in the state to provide rest and comfort stations. In 1919 this statute was made mandatory. "Every city and incorporated village," says the law, "shall provide and maintain a sufficient number of suitable and adequate public comfort stations for both sexes. The state board of health shall establish rules and regulations governing the location, construction, equipment, and maintenance of public comfort stations, and may prescribe minimum standards which shall be uniform throughout the state. The governing body of any city or incorporated village may adopt and enforce

additional regulations deemed essential for the proper construction and maintenance of such comfort stations."

The Wisconsin State Board of Health has issued a bulletin setting forth in minute detail the rules and regulations to be observed by cities and villages. In communities having water and sewage facilities, of which there were 160 in 1920, when the law went into effect, washing facilities and water flushed toilets are required. In places having waterworks only, or, neither waterworks nor sewerage (there were 303 villages of this class), toilets of the vault type are installed.

The rules provide for the most convenient and sanitary location, construction, equipment and maintenance of such comfort stations, either in separate buildings or in buildings used for other purposes. The number and capacity of these stations in proportion to population is designated and they are to be free of charge to those using them. Pay toilets, if installed, must be in addition to the requisite number of free toilets. Ventilation, lighting, heating, suitable direction signs, and all other essentials are fully covered by the regulations of the board.

Illustrations with explanatory text show clearly the plans for construction of the several sizes and types of stations, including even the most approved forms of hardware for doors and windows.

Wisconsin has set an admirable example in this matter. It is to the selfish, dollars-and-cents interest of every community that adequate provision be made for the comfort and convenience of its own people as well as for the stranger within the gates. J. M. D.

COLDS

EARLY in 1923, the United States Public Health Service worked out a plan for obtaining more facts than have been heretofore available concerning the common cold. Blank forms were furnished to some 13,000 persons in eleven different localities from Massachusetts to California. Each one of these persons was expected to report every two weeks as to whether or not he had had a cold. He was to supply at the same time information concerning the climate of his locality, whether or not he had been exposed to dampness or changes of temperature, the type of clothing which he wore, and similar information concerning details which have been believed heretofore to have a definite bearing on the catching of a cold.

A preliminary report covering the period from October, 1923, to June, 1924, had just been made available by those in charge of the investigations. This report shows first of all a definite relationship of the catching of a cold to certain periods of the year. A high incidence of colds in the latter part of October was followed everywhere by a decline which continued until the latter part of December; then a sharp rise occurred, which reached its highest point during the first part of January. During a five and one-half months' period, the number of colds averaged about two per person.

It is not possible at this early date to make any definite statements concerning some of the other factors which seem to have a bearing on the catching of a cold, but as the investigations are continued, this information will become available and, no doubt, will prove to be of real service in the control of this type of illness.

M. F.

THE MOTORIST AND THE CHILD

LISTEN, Mr. Motorist! Have you ever had this experience? You came to a corner and noticed a child, or maybe two or three children, on the sidewalk, about ready to cross the street. Have you ever thought of the thoughts that might be turbulently disturbing the little one's mind? He has been told to be careful in crossing the street, and has been warned of all the dire mishaps that might occur to him. He has been told also that he must get to school on time. The child stands on the corner, and when he sees an opening, gets ready to dash across. Then your car looms up like some gigantic ogre barring his pathway. The child darts back to the curbing, almost ready to cry with vexation and disappointment, and no doubt with his heart pounding rapidly. Now is your chance to prove that you are human! Step on the brake, throw the clutch out and put the gear in neutral; then wave to the child to pass across. Immediately afterward you will have a remarkable feeling of satisfaction that will more than repay you for the few moments that you may have lost. There is something about a child's smile that cannot be measured in terms of this world's goods. M. F.

One Night in Jinnie's Kitchen

RUTH STRANG

A NUMBER of years ago before mothers and fathers knew as much about food as they do now, there was a kind, jolly colored cook whom every one called "Jinnie," although her real name was Jermina. They called her Jinnie, I think, because she came from Virginia.

She cooked for Mr. and Mrs. Delerie and their three children, Jessie and Jean and Jack. Every one who came to visit said, "What a prize Jinnie is! Did you ever taste such biscuit, such pancakes, such mince pie, such chocolate layer cake?"

One winter Mr. and Mrs. Delerie went South leaving Jessie and Jean and Jack in the care of a governess, and the buying and baking and cooking in charge of Jinnie.

The children often came out to the kitchen—"Make us some doughnuts today, Jinnie," they teased, and Jinnie made whatever they asked her to make.

As the days went on the children grew cross and listless. They caught colds as fast as one catches mosquitoes in a mosquitoey country in the summer time.

"For the land sakes, what-all ails dem chillun?" said Jinnie. "I'se give dem everything dey asks for, an' dey grows crankier and moe maliciousful ebbery day."

The day after Christmas, Jessie and Jean and Jack quarreled all day, and went to bed tired and unhappy. Jinnie, out in the shining blue-and-white kitchen, stood watching the soapy dishwater go bubbling down the sink. Then she rinsed and dried the dish pan and hung it up in its place. It bounced back and forth several times as if bowing its approval. Jinnie turned the lights low. The aluminum saucepans hanging in a row near the stove shone softly like full moons. The coal fire peered through the draft openings into the shadowy corners of the kitchen. Jinnie sat in her rocking chair in the shadows.

And then a strange thing happened—at least, most people would think it strange. The door of the ice box opened and out glided a large white egg, the covered glass jar of butter, and a bottle of milk.

Jinnie saw them settle comfortably on the kitchen table. She heard a "splash, splash-splash" of the milk in the bottle, and a "tap, tap-tap-tap, tap-tap" of the egg on the table, just like a telegraphic code message. And suddenly, just like a flash, Jinnie knew the foods were talking. That was their way of talking, but never before had she understood at all. Now she knew just what they were talking about.

"Splash, splash-splash!" said the mild milk. "It makes me almost turn sour to see how people neglect me. How stupid even the brightest people are about food! I feel very sad indeed when I see them eating themselves sick instead of eating themselves well and strong."

"They haven't as much sense as the dumb animals," said butter softly. "Did you ever see a kitten or a calf who wouldn't drink milk?"

"No, I never have," said milk.

"Tap, tap-tap!" knocked the egg. "You're quite right, brother building food. Humans are stupid. Just see how many of them put me into smoking hot fat and let me stay until I'm as hard as leather. When there are so many good, easy ways to cook me!"

While they were talking, a loaf of bread stuck its head out of the bread box and looked around. Then it too joined the others on the table, followed by a large family of crisp, hard little rolls, who made quite a hubbub of tapping. The

cupboard door opened and the cereals climbed down—oatmeal, wheatina, rice and cornmeal.

And then the door of the store room opened slowly and a bunch of spinach glided gracefully out like a huge green butterfly. When it reached the table its leaves whispered a greeting just like the leaves of a tree when wind passes through it. An impetuous carrot, with its feathery green top waving wildly, next rushed in, followed by a big fat potato whose eyes seemed to be always laughing at something. An orange and a tomato, the C vitamin twins, came hand in hand, and lettuce and cabbage and two rosy apples just got through before the wind blew the store room door shut.

"Swish, swish-swish; splash, splash; tap, tap-tap." All the foods were talking at once. The bright orange of carrots and orange and the green of spinach and lettuce and cabbage and the red of apples were mirrored in the shining pots, so the clean white-and-blue kitchen seemed full of moving color as the vegetables glided and swayed back and forth.

Finally milk, whom the others seemed to admire greatly, raised one white hand high, and the foods became so still that even the fire held its breath for a minute, without a snap or a crackle.

"Fellow foods," began milk, "is it right for us to allow the children to eat themselves sick? Here are Jessie and Jean and Jack cross and unhappy all the time just because they choose other foods instead of us."

"Is that why they're cross?" asked oatmeal.

"Of course it is," answered spinach gently. "Healthy children are almost always happy.

"Tap, tap-tap," said carrot most decisively. "If they're so stupid as not to choose us, let them be sick, I say."

"Swish-swish; splash-splash, splash; tap, tap-tap," everybody said. "No, no! No, indeed! No, no, no; let us help to make the children happy!"

"Happy, ha-ha!" laughed the potato. "Happy, just like me."

"Who has an idea that would help us?" asked milk.

Nobody spoke.

Finally carrot tossed his green top. "Personally," he said, "I don't think those children are worth the trouble, but since you all want to do something, I'll tell you what to do. And I'll help you, too. There's nothing I like so well as a good fight. Let's throw out the other foods, and then the children will be glad to have us to eat."

"Fine! Fine!" said all the foods, delightedly. The egg jumped up so high he almost cracked when he came down on the table. Potato winked one eye and doubled up his fists, ready for the fight.

First they went to the cupboard and dragged out the box of pancake flour. Into the fire he went. Some others seized tea and coffee. Into the fire they too went. Then they rushed to the ice box.

"Pickles, aha!" said the carrot, seizing the bottle of pickles by the neck and throwing them into the garbage pail. "Here you, potato and cabbage, hold down the lid so they can't get out."

"There's a dish of custard in here," said the rolls, looking in curiously. (They had never seen inside the ice box before.)

"Oh, custard's all right, it's made of milk and eggs!" said oatmeal.

"What about the meat?" asked lettuce.

"If he promises not to come out more than once a day, we'll let him stay," said milk.

"I'll promise," agreed the meat. "It suits me very well in here."

In the cake box they found a soft, rich cake with sweet white icing. All the vegetables together couldn't put out the cake. "Help! Help!" they cried to the others.

Then the bread and cereals came and they pulled, but still they couldn't move the cake from its place.

"Help, help!" they called again, and milk and egg came running. Then they all pulled and pulled, and suddenly out came the cake with a jerk, over the heads of the other foods, and right out through the open window.

Plunk! it landed on the stones below, and nothing was left of it but crumbs.

"Oo, there's some molasses and raisin cookies in here, too," said the little crisp, hard rolls.

"Let them be," said the apples. "They are very nice with baked apples for supper or lunch."

"Now," said milk, "are all the foods that are left good foods?"

"I saw some candy in the dining room," said bread.

"Sure enough! Let's get after it," said carrot.

"But can't children have a piece of candy after their meal? asked the potato, who was inclined to be easy-going.

"Yes," said milk, "one piece after meals is all right, but I'm afraid these children just now will not remember to take just the one piece."

"I'd take no chances," said the orange. "I taste as good as candy anyway, and so do dates and figs and raisins."

"Come on, fellow foods," sang out carrot, leading the way into the dining room. But the box of candy had heard what they said, and the pieces jumped out of the box and began to run in all directions, like so many mice. What a chase they had! Potato ran into the furniture so many times that he was covered with bumps, and the cabbage caught her leaves on so many hooks and nails that she was quite in shreds; but finally all the candy was captured and thrown into the garbage pail with the pickles, and the lid fastened down tightly.

"Here's something that isn't either useful or ornamental," said carrot, seizing the frying pan by the handle. He swung it around his head three times and out the window it went, sailing over the lawn and, splash, into the duck pond it went and sank to the bottom.

"Now," said milk, "we must persuade Jinnie not to let the bad foods in again."

"Laws no," said Jinnie, who spoke now for the first time since the foods had come out. "You all don't need to pasuade mah. I'se done pasuaded already."

And she was. From that night, she always served only the simply cooked, good foods to the children.

In the Land of Pyramids

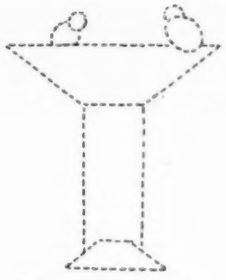
They call him Johnny—Johnny Smith.
He does not like to clean his teeth.
He hates the toothbrush—tooth-paste too.
Hear, Johnny, what I have for you!
In Egypt, where there flows the Nile,
There lives a sacred crocodile,
Old hundred years. His dreadful jaws
Are full of teeth as sharp as saws,
And what he catches on the shore
Is lost. You see it never more.
But after meals he likes to rest,
And in the sun to bask his crest;
And as he sleeps with open mouth
There come the birds from East and South,
And in his jaws they pick and bite
Until his teeth are clean and white.
Dear Johnny! See, that even there,
The crocodiles know dental care.
They do not make so much ado
About the toothbrush. WHY SHOULD YOU?

—Dr. Karel Driml in North Carolina Department of Health Bulletin.

Bound *for a* Bath *in* Healthy Land

BY JOHN T. LEMOS

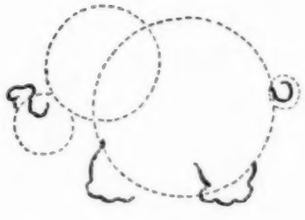
Did you ever see a fat little bird take a bath in a pool of water in someone's garden? He always seems to be having such a good time. Baths always make you feel clean and tingley all over. I wonder if you can draw some of these Health pictures?



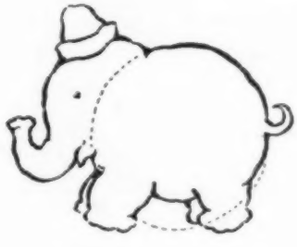
One summer day
In Healthy Town,
I thought I'd take
A look around.

I saw a little garden,
Where
A fountain splashed up
In the air.

And six fat ROBINS,
Nice and cool,
Were taking baths
Inside a pool.

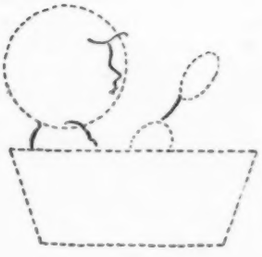


Two ELEPHANTS,
Not far away,
Had just come in
From hauling hay.



They filled their trunks
From a stream nearby;
I really thought it
Might go dry.

They blew straight up
With all their power,
And gave themselves
A nice cold shower.



About that time
I heard a noise,
And saw six chubby
Healthy BOYS

Bound for a bath
In Healthy Land.
"Come on!" they said,
"These baths are grand!"

"We take a good bath
Every day;
That's why we always
Feel so gay."

HEALTHFUL BEAUTY

CHILBLAINS AND FROST-BITE

Readers may feel free to suggest beauty topics for authoritative and scientific discussion in these columns and to submit questions relating to beauty for answer by recognized authorities in medicine. Write to "Healthful Beauty," HYGEIA, enclosing a two-cent stamp.

THE EFFECTS produced by cold weather may be more serious to some unfortunate persons than the mere causing of chapped skin, which was discussed in this department last month.

The person suffering from chilblains is often a blonde young girl who is underweight and poorly nourished. In cold weather the hands and feet are bluish-red and cold to the touch. When pressure is made upon the skin a white area is produced which slowly becomes again bluish-red. The palms and soles are usually bathed in a cold perspiration. The attack of chilblains may be preceded by a mild frost-bite but this is by no means always the case.

The attack is characterized by the sudden onset of bluish-red, shiny, swollen plaques usually situated on the heels or toes, but they may also occur on the fingers, ears and nose. The masses give rise to intense burning sensations and pain, which are worse toward evening and after sudden changes from cold to warm temperatures or vice versa. Later on in the winter season these areas may ulcerate. With the onset of warm weather the chilblains and the accompanying pain and discomfort entirely disappear, only to return the following winter.

Should Build Up General Health

The victim of chilblains should wear warm clothing, avoid sudden changes of temperature and prolonged exposure to cold, and should have the advice of a physician in an attempt to build up the general health.

Frost-bite is the result of superficial freezing of the skin. During the period of freezing the skin is white. The thawing out is accompanied by marked pain and burning.

In order to prevent too rapid thawing, the parts should be rubbed with snow, but in a warm room. Some times the mistake is made of rubbing the hands or feet with snow while in the intense cold with the result that the parts are more thoroughly frozen.

After a mild freezing of the skin the part develops a bright red inflammation which gradually disappears in about 10 days. A more pronounced freezing will be followed by numerous blisters. These eventually will peel off without scarring. But if a severe freezing occurs the water blisters may be followed by ulcerations which leave mutilating scars, or gangrene may set in and amputation may become necessary.

Guard Against Second Frost-Bite

After an extremity has once been frost-bitten it is usually more sensitive to cold and more readily frozen. This is true probably because the frost-bite has obliterated some of the superficial vessels, thereby reducing the amount of blood supplied to the skin. Therefore, one should be on guard against a repetition of the frost-bite by wearing warm gloves, stockings and head covering.

The danger signal of freezing is the loss of sensation. As long as pain continues in the extremity no damage has been done. When pain ceases, it indicates that the sensory nerve endings of the skin have become anesthetized by freezing and shelter should be sought at once.

Cleero Shampoo

To the Beauty Department:—I have been using Cleero Shampoo and would be very grateful to you if you could give me any information about this product.

B. M., Illinois.

Answer.—Cleero, which is labeled "the Vanishing Shampoo," is another piece of cosmetic quackery put out by the Van Ess Laboratories of Chicago. "Van Ess Special Dandruff Massage" was found by the American Medical Association's chemists to consist essentially of kerosene, alcohol and water with a dash of quinin.

The thesis advanced for the use of Cleero is that the use of soap on the hair is harmful and that "the free alkali present in most soaps" makes them still worse. The Cleero advertising leads one to believe, although it does not actually so state, that Cleero is not a soap and it definitely states that "Cleero contains no free alkali." The facts are that Cleero *is* a soap and *does* contain free alkali.

Cleero was analyzed by the chemists of the American Medical Association, who reported that it is essentially a perfumed, watery solution of soap with free alkali and glycerin.

Gouraud's Oriental Cream

To the Beauty Department:—I would like to ask if Gouraud's Oriental Cream, when used instead of a face powder, contains anything injurious to the skin?

A. S., Oregon.

Answer.—According to various analyses that have been made, Gouraud's Oriental Cream is essentially calomel suspended in water. From information that we have received, this product seems to have been responsible for several cases of pigmentation of the skin of the face causing the victims to seek advice from skin specialists.

HEALTH NEWS AND VIEWS

APPLYING THE BRAKES QUICKLY NOT MATTER OF SEX

Women are just as speedy when it comes to stopping an automobile as are men, according to scientific tests for motor car drivers recently devised. Negroes can apply the brakes just as quickly as whites. In fact, race, sex, color or education do not count when it comes to quick reaction to a stop signal, but experience and natural quickness do.

H. H. Allen, automotive expert of the National Bureau of Standards, and Prof. Fred A. Moss, psychologist of the Institute for Government Research, have worked out some scientific tests for chauffeurs. The results of their tests are discussed in a recent issue of *Science*.

An apparatus has been devised by these two men that measures accurately the time that elapses between the signal to stop and the application of the brakes.

A motor car with a standard gear shift is equipped with a tachometer, an instrument much more accurate than a speedometer because it records every revolution of the wheels. Two pistols, muzzles downward, are fastened to the running board of the car. The bullet in the cartridge has been removed and red litharge inserted so that when the pistol is fired a red mark is left on the pavement.

When the tachometer registers a certain speed the examiner fires the first pistol. At that signal, the person being tested immediately removes his foot from the accelerator to the brake, automatically discharging the second pistol. The distance between the red marks on the pavement is measured. This distance divided by the speed of driving will show to a thousandth of a second the time required for the response of the driver.

CHILDREN'S BENEFACTOR KNOWS WHAT IT MEANS TO BE CRIPPLED

William Henry Eustis of Minneapolis is a cripple and a rich man. In the last few years he has given $1,500,000 for the treatment and education of crippled children in Minnesota, his latest gift being a 21 acre wooded site on the west bank of the Mississippi River on which has been erected the new Michael Dowling School for Crippled Children, said to be the finest school of its kind in the country.

Forty-four acres adjoining the Dowling school and $1,000,000 have been given by Mr. Eustis to the University of Minnesota for an orthopedic hospital and convalescent home for crippled children.

The Minneapolis board of education erected the new school building, which is a one story structure that will necessitate no stair climbing by the handicapped pupils. Children from outside of the city may enter the school, because state aid is given for each pupil-patient. There are 135 pupils in the school.

Formal opening of the new school took place at appropriate exercises on November 19.

SPENDING THE PUBLIC HEALTH DOLLAR

Out of every dollar that the city of Detroit spends for public health work, 47 cents goes for maintenance of hospitals, 10 cents for school health work, 7 cents for contagious disease, 6 cents for infant welfare and preschool work, 5 cents for tuberculosis, 3 cents for dental work and lesser amounts for other services.

The Detroit appropriation for public health last year was $1.83 per capita. In commenting on the appropriations for various services, the health officer of that city says, "Who can say whether the apportionment is correct?"

MISSOURI USES HOSPITAL CAR IN FIGHT AGAINST TRACHOMA

A vigorous effort is being made to arrest the spread of trachoma (contagious granulated eyelids) in the state of Missouri. The state board of health, in cooperation with the U. S. Public Health Service, is holding free traveling clinics in a special hospital car furnished gratuitously by the Wabash railroad.

This disease has caused one fourth of all the blindness in the state of Missouri. Its spread can be arrested only by the prompt, vigorous treatment of those who are afflicted, by warning these victims and all persons who come near them that the disease is "catching," and by instructing all persons as to the steps to be taken to avoid infection.

Newspapers are helping by urging every one with inflamed eyelids and red, sore eyes to visit the hospital car for free examination and advice and to tell all others about this free trachoma clinic.

The U. S. Public Health Service supplies for these clinics a surgeon and a surgical nurse who have had special experience and training in trachoma.

DETROIT PROTECTS ITSELF AGAINST MAD DOGS

Every dog in Detroit must be vaccinated against rabies, or else he is allowed on the streets only when on a leash or muzzled, according to an ordinance that went into effect in that city in June.

The ordinance was passed following a rapid increase in the number of mad dogs and cases of rabies in the city in the early months of the year.

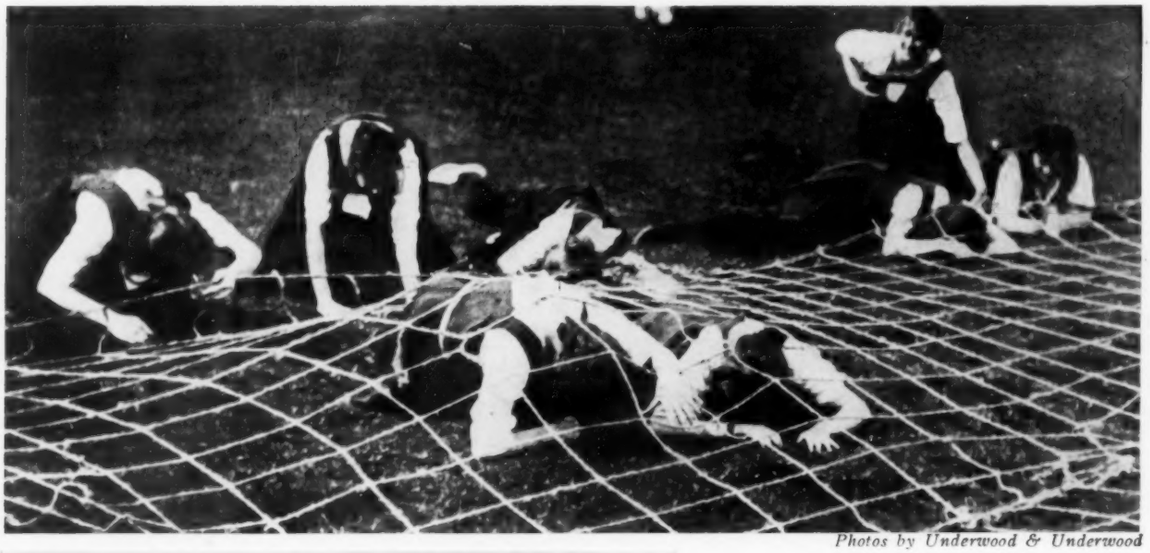
Unmuzzled dogs found on the street without tags certifying that they have been vaccinated are taken to the city pound.

The ordinance seems to be accomplishing its purpose. Of thirteen dogs taken to the pound in January last, seven were found rabid; in February twenty out of thirty were rabid; in March twenty-five out of forty-seven; in June twenty-two out of thirty-six. In July, after the ordinance was passed, only thirty dogs were taken up as not complying with the law and only ten were found rabid, in August only twelve out of thirty-two were found rabid.

Rabies is not a common disease, but the agonizing suffering of its victims is so dreadful and the fatal result so inevitable that no effort should be spared by any community to destroy every possible source of infection.

Vaccination of animals against this disease is easy, certain, and not very costly. Every dog that is worth keeping at all is worth protecting against rabies for its own sake as well as for the protection of other animals and of the human beings with whom it may come in contact.

Inoculation or vaccination against rabies can be done by any veterinary surgeon. Dogs not worth such protection should be painlessly put to death.



Photos by Underwood & Underwood

SCHOOL GIRLS AT PLAY

The British college girls above are contestants in an obstacle race. The occasion is the East London College Sports.

Girls are just as good as boys at volley ball, it was proved in a recent competition in Chicago. More than 2,500 girls and boys participated in a volley ball tournament under the auspices of the Chicago schools and playgrounds.

There are many Dianas at Bryn Mawr, where the girls recently took up archery. A former national archery champion is their coach.

Pacific and Atlantic

PUTTING THE PEP INTO YOUNG AMERICA

Pep in gymnasium classes means greater energy in studies, this Brooklyn public school instructor believes. Every student in the school goes in for athletics.

END OF WALK NOT IN SIGHT

Fourteen blind soldiers recently set out on their third annual walk from London to Brighton, England. Each competitor was accompanied by a well known amateur walker, who held one end of a tape attached to the arm of the blind man. A blind British war vet won the hike in 10 hours, 32 minutes and 5 seconds. With him is E. C. Horton, British athlete.

Photos by Pacific & Atlantic

PLENTY OF THRILLS

Riding behind an ice boat is daring sport. These boys and girls on the Shrewesbury River, New Jersey, are letting a boat supply the motive power. "Take your places at the end of the line!"

Pacific & Atlantic

A STREET URCHIN'S HOME

Winter starts early in Moscow and brings suffering to many little homeless waifs. Six thousand of them were found frozen last winter in the cities of Moscow and Leningrad alone. These two are at home in a packing case.

RAW MATERIAL IN THE MELTING POT

Introducing the family of a steel mill worker in Pittsburgh. They arrived at our shores only recently and occupy a little shack in one of the drab tenement villages near the industrial capital of the country.

Photos by Ewing Galloway

LABORERS IN PLENTY

The future ranks of labor are to be well supplied, judging from this Pittsburgh steel worker's family. Note the new baby and the beds made of chairs.

THREE LEPERS DISCHARGED AS CURED

Recently three lepers were discharged from the National Leprosarium at Carville, Louisiana, as having now no manifestations of the disease. To all intents and purposes, they have been cured although the doctors merely certify that the disease has been arrested and that these persons are no longer a menace to the public health.

The treatment at Carville, while by no means wholly confined to the use of special preparations of chaulmoogra oil, depends very materially on these preparations for its efficacy.

The accommodations for lepers at Carville have never been sufficient to take care of all the lepers who apply. At present there are 211 beds, all of which are filled, but there will soon be facilities to care for a total of 415 lepers and it is believed that the new buildings will be rapidly filled as there is a large waiting list.

The timely provision for the isolation and treatment of the victims will, no doubt, diminish the spread of leprosy in the United States, a matter that is already giving concern to national and state health officers.

Few people in this country other than physicians ever see a case of leprosy although it is estimated that between 500 and 1,000 lepers are still at large in the United States. Unless the disease is in its last stages the average person would never recognize it. Lepers have been known to live in communities for years before being recognized as such. Often these persons are discovered to be lepers when applying for treatment of some other condition.

HIGH SCHOOL STUDENTS LIST FAVORITE RECREATIONAL PURSUITS

High school boys and girls name theater-going as their principal form of recreation, according to the results of a study of the leisure time interests of 1,076 students made by Prof. T. Earl Sullenger of the University of Omaha, and published by the Playground and Recreation Association of America in the November *Playground Magazine*.

Hiking proves the next popular form of recreation, and reading follows. Forty-four per cent. of the boys and girls play baseball, and 34 per cent. tennis.

Dancing was named their favorite recreation by 224 girls and 109 boys, 31 per cent. in all. All the recreation is not non-productive, as 21 per cent. named gardening and 81 boys find recreation in automobile repairing. Twelve per cent. of the boys spend most of their leisure time with the radio.

Only 4 per cent. play pool as a means of recreation.

HYGIENE EXPOSITION OF VIENNA

Announcement is made that an Exposition of Hygiene and Sanitation will be held in Vienna, Austria, during the months of April and May. The purpose of the exposition is to demonstrate the achievements of modern hygiene and to emphasize its possibilities and call attention to its needs.

Many of the visitors from the United States who are in Europe next spring will doubtless find this health exposition in Vienna full of interest and profit.

BRAILLE MAGAZINE FREE TO SOLDIERS

American soldiers who lost their eyesight during the war are to receive free the Inter-Allied Braille magazine, published in Paris, it is announced by William Nelson Cromwell, president of the Permanent Blind Relief War Fund, 590 Fifth Avenue, New York.

Public libraries maintaining reading rooms for the blind also will receive the publication gratis.

WICHITA SCHOOL HAS HEALTH BANK

The First National Bank of Health of Wichita, Kansas, has as its assets good health habits. The bank of health is housed in a new five-story bank building, made by the boys in manual training classes in one of the Wichita schools. The miniature building is a well constructed cabinet, with a substantial base, having windows for deposits and withdrawals.

Under the direction of a teacher of physiology, whose idea the bank is, credit slips are given for deposits. Clean teeth give ten points; good posture, 10 points; milk lunch, 5 points; going to the clinic at the advice of the school nurse, 25 points. Drawing a health poster gives 20 points; rank in the Modern Health Crusade a certain number of points.

Withdrawals are also on the point system. Dirty hands bring a withdrawal of 20 points; failure to follow the nurse's advice, 25 points.

Each day, the children make out their deposit slips, and passing before the bank drop the slip in the appropriate window.

The bank balance is posted each day and depositors are greatly interested in keeping out of "the red," says Miss Reed, the teacher and president of the First National Bank of Health.

KENTUCKY TO HOLD HEALTH POSTER CONTEST

The Kentucky state board of health is sponsoring a health poster contest in the rural schools of that state as an aid in the teaching of health and in developing school spirit and community pride.

The schools are divided into groups, to include all one room schools, all schools of two or more rooms, and schools in cities of the fourth, fifth, and sixth classes, and in villages and open country.

Posters may be on the subjects of cleanliness, teeth, food (including milk, fruit, fresh vegetables and good menus), rest, exercise, play, sleep, fresh air and medical examination. The prizes will include articles of health equipment to be given to the school in which the prize winner is enrolled.

The prize winning posters are to be exhibited at the state fair in Louisville next September.

Experience has shown that such contests are an effective means of arousing a live interest in health topics among school children and teachers.

"COLDS" RESPONSIBLE FOR 25% OF SCHOOL ABSENCES

Fifteen public schools in Washington, D. C., were studied during 1923-24 by a committee of which Dr. Louise Taylor-Jones was chairman, in order to discover the causes of school absences. The grade chosen for this study was the third. The results of the study have been published by the U. S. Public Health Service. It was found that more than 70 per cent. of all absences were due to medical problems, more than one fourth being due to the common cold, and nearly 40 per cent. to respiratory disturbances. Boys and girls seemed to be absent equally for all causes.

HOW ARGENTINA TEACHES HEALTH

Argentina's new national department of hygiene is using modern methods to teach health to the people. Railroad cars supplied with radio and moving picture outfits, first aid disinfecting material and other health supplies are sent through the rural sections of the country. Lectures, posters and advertisements are also used to teach health.

A child welfare division has been established and mothers' and babies' centers have been opened.

QUESTIONS AND ANSWERS

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a two-cent stamp. If the question is of general interest, the answer will be published; otherwise it will be sent by mail. Questions are submitted to recognized authorities in the several branches of medicine and answers framed by them. The names of correspondents will not be published. Diagnoses in individual cases will not be attempted nor treatment prescribed. Answers to questions relating to beauty will be found in the "Healthful Beauty" department of this magazine.

Milk from Anthrax Infected Cow

To the Editor:—Can a human become infected by drinking the milk from an anthrax infected cow? It was milked before knowing of the infection.

G. H. L., Louisiana.

Answer.—Both the flesh and the milk of cattle infected with anthrax are dangerous and will cause the intestinal form of the disease in human beings. The bacterial organisms in such material are in the vegetative stage and would readily be destroyed by heat. Hence pasteurization of milk from such an animal would remove the danger.

The anthrax bacilli pass into the milk from the blood during the stage when the septic matter is circulating in the blood, which is usually late in the disease or at the time of death. In severe infections, however, septic matter occurs early in the blood and the animal may die in a very few days. It would be possible for a cow to become stricken with the disease and have the infection in the blood even before the clinical recognition of the disease, though this would be unlikely.

Constipation in Infant

To the Editor:—Will you please tell me what I can do for my 4½ months old baby who is very constipated. She weighs 14½ pounds, has a good appetite, good color, sleeps about seventeen hours a day and seems normal in every way. I am nursing her. Since bringing her home from the hospital when 2 weeks old she has had few normal bowel movements. Our physician has advised orange juice, prune juice and fig juice. None of these seems to benefit her. I have resorted to suppositories to get bowel movements. Massage of the abdomen does not seem to help her. I would more than appreciate your help. W. B. M., Idaho.

Answer.—Some breast-fed infants who are thriving may have infrequent bowel movements, one normal stool every two or three days. Mothers often worry needlessly about this. These healthy infants are utilizing the food so completely that the amount of waste is minimal. This is not constipation.

In very obstinate cases a few ounces of strained oatmeal water sweetened with sugar may be fed several times a day. Enemas and laxatives make the condition worse.

Infantile Paralysis

To the Editor:—What is the cause of infantile paralysis? Is it ever curable? Does the age at which the victim is attacked affect the curability? Does the amount of time elapsed since the disease ran its course affect its curability? On the whole, does one deformed by this disease die at an early age?

C. J. P., Minnesota.

Answer.—All observers agree that infantile paralysis, also known as acute anterior poliomyelitis, is an infectious disease and must be caused by a germ of some kind. Several investigators have reported finding germs in patients with infantile paralysis but no one has yet satisfactorily proved that he has discovered the germ that is the sole and real cause of the disease.

It is not known how the disease is contracted and where the infection exists outside of the human body. Demonstrated direct contagion is so rare as to be almost negligible, and there is no proof that the disease is transmitted by insects or other animals, or by dust, water, milk, or other food or drink. Nevertheless, it often occurs in epidemic form, as in the city of New York in 1916.

More cases recover entirely than the combined number of fatal and paralytic cases. Experience during epidemics has revealed a large number of very mild so-called abortive cases with only transient paralysis or none at all. The death rate in the acute stage has varied in different epidemics and localities but has practically never been over 20 per cent.

The longer the paralysis has lasted and the greater the wasting of muscle, the less likelihood of recovery. After one year, little further improvement is to be expected, but, on the other hand, improvement usually is continuous, though gradually less marked, during the first year.

Age does not directly affect the curability, but deformities, especially shortening of the affected limbs, are more troublesome and difficult to manage the earlier the onset.

As a general proposition, one deformed by this disease does not die at an early age.

Calcium Lactate

To the Editor:—In a person who is over 50 years old is there any reason for thinking that gallstones or hardening of the arteries may develop from taking calcium lactate? The amount consists of a five grain tablet three times a day. Considerable relief has been obtained by this treatment in rhinitis and hay fever, with asthmatic tendency.

M. H. D., Illinois.

Answer.—There is no evidence to support the belief that gallstones or hardening of the arteries may develop from taking calcium lactate. If you are getting relief from rhinitis and hay fever, you certainly should keep it up.

Neurosyphilis

To the Editor:—I have a few questions I would like you to answer about neurosyphilis. The doctor said I contracted it from my brother who died with it last December. However, he was not paralyzed. The right side of my face is paralyzed. A specialist advised me to have a blood test taken. The result was a four plus Wassermann test. How long will I have to take treatments? Have I a good chance to recover fully from a case of two or three years' standing? How long do you think my face will be paralyzed? I have taken five injections of "606." The doctor advised seven more, and treatments for two or three years. I am a single man, 28 years old, a barber. I work every day and feel well. Is there any danger of transmitting the disease to others? If I cannot fully recover how long can I live? Does a drink of home brew or whisky harm me? H. McD., Indiana.

Answer.—There are different forms of syphilis of the nervous system, some much more serious than others.

One form is that known as paresis, often popularly called softening of the brain. This is extremely serious and usually fatal within about two years. This form does not as a rule appear before ten or fifteen years after the primary infection.

Other forms of nervous syphilis usually appear within two or three years after the first infection and though they represent a serious complication are quite capable of cure if properly treated. Even when cured they sometimes leave behind a permanent scar in the nervous system which may show itself by a permanent paralysis of some kind. Facial paralysis most often gets well, though it may last for several months.

In all forms of nervous syphilis it is essential that treatment be thorough and prolonged, extending over at least two or three years. The treatment is usually given intermittently, a course of treatment being followed by a period of no treatment.

The only method of determining when it is safe to discontinue treatment is by means of blood and spinal fluid tests. The progress must be followed by making such tests in every individual case; there is no general rule that can be applied to all cases, thus avoiding the necessity for making the tests from time to time. The patient must realize that the symptoms may all disappear and lead him to believe that he is well, yet the germs may still be alive in the body ready to set up fresh and perhaps more serious symptoms at any moment.

Whether the infection can be transmitted to others depends on the stage the disease has reached. No risks of spreading the disease should be taken; the physician who is treating the case knows what stage has been reached and he is the only person who is in position to advise whether it is infectious now.

There is no more harmful combination for the nervous system than that of alcohol and syphilis. Either of these two alone is harmful. The two together greatly increase the danger of bringing about the very fatal type of nervous syphilis already mentioned under the name of paresis.

Cracking of Jaw

To the Editor:—Could you suggest a remedy for a cracking of the socket of the right jaw? It is very annoying. The left side creaks some also. The condition was noticeable about four years ago and has progressed to the extent that it is now very difficult to eat. I am afraid my jaw will lock, although I am told that it will not. My doctor tells me it is an arthritis condition; others inform me it is a nerve condition. I have had my tonsils removed and my teeth were repaired six months ago, but without noticeable benefit. I have reached a condition where I hate to go away from home. The fact that I travel for a living makes it difficult. A. E. R., New York.

Answer.—Changes in the jaw socket are very common in cases of chronic arthritis and, as in other joints, these changes alternately improve and become worse. The likelihood of the jaw locking is small but sometimes the two bones do grow together, requiring an operation to make an artificial joint.

It would be wise to have an x-ray picture taken of this joint, both to see its present condition and to have a basis for comparison later. In the meantime, do not allow the condition, unpleasant as it is, to interfere with your activities. Every one has his troubles and success in life consists in overcoming them.

"Fayro"

To the Editor:—Won't you please tell us about Fayro? R. A. B., Indiana.

Answer.—With her inquiry, Mrs. B. encloses an advertisement of "Fayro, the Hot Springs Home Bath Treatment." According to this advertisement, "Fayro is the new home bath treatment that is guaranteed to reduce you 2 to 4 pounds in each bath."

We have in the files of the American Medical Association advertisements of Fayro in which the public is told that the product is the "concentrate of the same natural mineral salts that make effective the waters of twenty-two hot springs of America, England and continental Europe."

All the obese have to do is to dissolve Fayro in a bathtubful of hot water and take a bath in the mixture. Then, according to the advertising, "Fayro, by opening your pores and stimulating perspiration forces lazy body cells to sweat out surplus fat."

The claim that the fat of the body, surplus or otherwise, can be sweated out is preposterous. The Fayro advertising is similar in character to that of another obesity "cure," San-I-Sal, which also was guaranteed to take off 2 to 5 pounds in one bath.

That a hot tub, whether it contains Fayro or not, will reduce the weight of the body, to the extent of the sweat excreted, is perfectly true. It is equally true that in a very few hours the body will have received enough additional water to make up the loss. Even an elementary knowledge of physiology should make it impossible for fakers to deceive the public into believing that obesity can be cured by putting something in the bath water. Every product sold for such a purpose is an unmitigated fake.

Night Blindness

To the Editor:—Is night blindness a dominant characteristic? Are there any known causes of night blindness besides heredity? There were ten children in our family and two of us are affected that way, but as far as can be learned the condition was never present in either my father's or mother's families. Is there any help for this? What few doctors I have consulted say there is none. If I were to have children, is it more than likely that they would be so afflicted? L. H., Iowa.

Answer.—In night blindness the person has great difficulty in getting about at dusk or as soon as the amount of light which falls upon objects is reduced. It occurs in a number of conditions of poor nutrition, such as scurvy, but most frequently in retinitis pigmentosa (this is an inflammation of the light perceiving membrane attended with a deposit of pigment). The cause of the latter is unknown. The night blindness is only a symptom so cannot be spoken of as a "dominant" or "recessive" characteristic.

The disease itself is not always hereditary although the occurrence of the affection in successive generations has been reported. It cannot be foretold whether or not a child would have the disease. It is incurable, but is only slowly progressive and, possibly because of this fact, rarely renders the individual blind until late in life, usually in the sixth decade or later.

Western Medical Association Epilepsy Cure

To the Editor:—Would you be so kind as to inform me as to the reliability and status of the Western Medical Association of Chicago. It sends out wonderful literature as to its methods of curing epilepsy. We are interested to find a cure for my sister's little girl who has developed that disease. We will be grateful for any information. C. R. T., Texas.

Answer.—The Western Medical Association is a mail order medical concern selling an alleged cure for epilepsy. The treatment was analyzed in the chemical laboratory of the American Medical Association and found to consist essentially of phenobarbital (luminal) and a laxative. Phenobarbital has been used for years

by the medical profession in the symptomatic treatment of epileptic seizures. Like the bromids, it has no curative effect.

There is no moral excuse for the sale of phenobarbital in a secret mixture sold on the mail order plan for the self-treatment of so serious a condition as epilepsy.

Trachoma

To the Editor:—I am writing for a friend of mine who has suffered for some years from trachoma. He has visited a number of physicians who, while they have taken his money, have not helped him. I understand that trachoma is curable.

E. O. H., Illinois.

Answer.—The question, "Is trachoma curable?" has been in dispute among eye specialists for years. The majority think not, in the sense of a true cure.

In the first place, the diagnosis must be accurate. There are a good many eye conditions that closely resemble trachoma and a definite diagnosis is possible only after many months of uninterrupted treatment. Again, there are varying degrees of trachoma that seem to depend on the virulence of the case, which is unknown, the resistance of the individual eye, and the intensity and duration of the treatment employed. These may vary from mild irritation that eventually leads to scar formation in the lids without undergoing the acute efflorescence that is commonly associated with trachoma, to the most virulent form of the disease.

The treatment of trachoma has become fairly well standardized. In the acute stages, accompanied by secretion that gathers in the inner corner of the eye or matts the lashes together, some form of silver is employed and if there be follicles in and under the membranes that line the lids (the conjunctiva), these nodules must be opened and the contents pressed out.

After the acute stage has passed, some form of copper is usually employed, accompanied by a wash that by its mechanical action keeps the membranes cleansed. Active treatment must be continued two years or more. After active treatment has been discontinued, a patient with trachoma should report to his physician for observation, at least once a month for several years.

Food Theories

To the Editor:—I would be very much obliged to get your opinion on some food theories advanced by a certain physician. He claims that white sugar should be completely abolished from the diet. It acquires something in the refining process, he says, which when taken into the body unites with the phosphorus of the nervous system and calcium of the teeth, and is responsible for many ailments. As substitutes for white sugar, use brown sugar, honey or corn syrup, he advises. Consumption of white sugar is one cause of cancer, he thinks. White flour is harmful for about the same reason as given above in regard to white sugar. It should never be used, since it is acid forming. Meat should be eaten sparingly three times a week at most. This, too, is acid forming. Pork, in any form, should never be eaten, he contends. Of the three beverages, coffee, tea and cocoa, cocoa is the most harmful. Coffee and tea are harmful if taken with milk and cream and, of course, sugar. Vinegar should never be used. Raw fruits and vegetables are better than cooked ones. I shall be interested in your opinion of this diet. W. P. A., Connecticut.

Answer.—Although a great many claims have been made about the harmfulness of white sugar, we doubt if any have ever been substantiated. Brown sugar, honey and corn syrup are all wholesome sugars. Since no one has yet determined the cause of cancer, the statement that consumption of white sugar is one of the causes of cancer is, of course, not founded on fact. There is nothing harmful in highly milled flour although it is true that certain elements have been removed. The claims against it are certainly exaggerated.

Regarding the use of meat, so much that is merely fantastic, or even nonsensical, has been spread abroad about it that it is difficult to see the origin of some of the claims. Meat is almost a necessity to a normal person's well balanced diet, as some of the constituents of meat are not replaced by any other food. The English are great beef eaters and there are certain authorities in England who are of the opinion that more harm arises from a diet too sparing in meat than from one in which there is meat in abundance. Pork, if well cooked, acts as any other meat except that it contains more fat and for that reason usually takes longer to digest.

Regarding the relative values of coffee, tea and cocoa, coffee contains the largest percentage of caffein which, in the small doses found in a cup of coffee, is merely mildly stimulating; taken in excess, coffee or tea causes an overstimulation of the nervous system. Tea, when freshly brewed, has practically the same effect as coffee, but if allowed to brew too long, some of the tannin is extracted which is certainly harmful to the digestion.

Why vinegar should never be used is a question we cannot answer on the basis of any known scientific fact. The advantages of raw fruits and vegetables over cooked lie in the fact that in some instances certain of the vitamins may be damaged by cooking.

Many foods that produce acid have been mentioned in this question. All foods produce either acids or alkali, and usually a normal diet is so well balanced as to leave the residue in the urine slightly acid. This is perfectly normal and is probably distinctly to the advantage of the human body. Certainly a diet that would make the urine constantly alkalin might cause many harmful results, such for instance as kidney or bladder stones.

Epilepsy

To the Editor:—I am writing for some information on epilepsy. I started to have epileptic seizures when I was ten and had them quite bad for a few years; then as I grew older it would sometimes be months between attacks, and finally they ceased completely. I have not had an attack for six years. Last year I married and so far have had no children. I am afraid to have children lest they be sick as I was, and want no child of mine to suffer as I did. Some say it will be all right for me to have children; others say not. Would you please give me the right advice. J. O. L., California.

Answer.—Heredity unquestionably is an important factor in a causation of epilepsy. It must be remembered, however, that there are many different forms of epilepsy and in some the influence of heredity is much less than others. Before giving advice concerning a particular case, it is quite important to know the facts and nature of the epilepsy in question.

The commonest form of epilepsy is that spoken of as essential or idiopathic epilepsy, and it is in this variety that heredity plays a large part. Many studies have been made of the families of epileptics and the figures vary within wide limits. It is, however, probably fair to say that epilepsy will be found in about 20 per cent. of the families of persons suffering with essential epilepsy.

From another point of view, it has also been said that the children of persons with essential epilepsy frequently are born dead or die in infancy, many of those who survive show some form of nervous disease and possibly 25 per cent. develop epilepsy. These figures necessarily give only probabilities based on

the study of a number of cases; they do not justify any assertion as to what will happen to the offspring of any one epileptic person.

The danger of giving birth to badly tainted children is probably greater when epilepsy has been present in other members of the family or when there have been many examples of nervous disease. That the risk of transmitting epilepsy to the offspring is considered serious is evidenced by the fact that some states prohibit by law the marriage of epileptics without a certificate that tney have fully recovered.

Even when the convulsions have ceased for a considerable time, careful investigation of the family history and as exact a diagnosis as possible of the kind of epilepsy is necessary before advice can be given as to the propriety of marriage and reproduction. These investigations should be made by a competent physician, preferably by a specialist in nervous diseases.

Newman's Obesity Cure

To the Editor:—I have been taking Dr. R. Newman's obesity treatment and would like to know what the pills consist of. B. J. K., Colorado.

Answer.—R. Newman of New York sells an alleged cure for obesity on the mail order plan. His advertisements claim that treatment reduces weight at the rate of a pound a day.

Typical of obesity cure quackery, the claim is made that no dieting or exercise is necessary. As is common with mail order medical concerns, Newman seems to have a sliding scale of prices, starting at $10 and coming down by easy stages through $5, $3, until 50 cents is reached.

The Newman nostrum was analyzed a few years ago by the state chemists of North Dakota who reported that the cathartic tablets forming part of the treatment contain aloin, strychnin and probably podophyllin. The large tablets were found to contain potassium carbonate, starch and possibly bladderwrack.

Whatever reduction in weight may follow the use of the Newman nostrum is probably due to the purging or the digestive disturbance that may follow.

Vincent's Angina

To the Editor:—Will you be good enough to give me some information about the disease called Vincent's Angina? One of my wife's relations, a man 29 years old, died of this disease recently. He was ill for a period of about six weeks. During the early part of his illness he was treated by administration of "606." His Wassermann test was negative. The cause of his death was recorded as (1) Vincent's Angina, and (2) secondary anemia. I have been told by some physicians that Vincent's Angina is a serious disease, the mortality being about 60 per cent. Other physicians have told me almost all cases treated by administration of "606" recover. I wish you would tell me something of this disease, with special reference to the present mortality rate and the efficacy of "606" in controlling the disease. F. C. S., Pennsylvania.

Answer.—Vincent's Angina is an acute ulcerative disease of the mouth and other mucous membranes due to a bacterial organism called the bacillus fusiformis and Vincent's spirillum. It is characterized by the presence of irregular, superficial ulcers, covered with a whitish or greenish gray membrane. When this membrane is forcibly removed the exposed surface is tender, raw and bleeding.

The symptoms are usually trivial; a slight elevation of temperature, with a swelling of the lymph glands of the neck and those under the jaw and with tenderness in the involved areas. There is a fetid odor to the breath. The condition may be confused with diphtheria, syphilis or tonsillitis. Diagnosis can be established by the demonstration of its specific organisms. The condition may last for weeks if left untreated, but it yields readily to salvarsan or arsphenamin (606). The organism is not disease producing when exposed to oxygen and is usually controlled by peroxid of hydrogen mouth washes.

This is the ordinary picture of Vincent's Angina. However, secondary infections with other organisms may produce deep infections that are very serious. These hardly pass, however, under the name of Vincent's Angina. Noma (gangrene of the cheek, especially occurring in malnourished children) is the most familiar of these infections.

As Dr. D. J. Davis and others have shown, the same sort of infections may involve the genito-urinary tract, the ear, the lungs, the appendix and other parts of the gastro-intestinal tract and may produce lesions in the joints, heart and elsewhere. These manifestations of the infection are serious diseases, but are not properly called Vincent's Angina.

Colitis in Infant

To the Editor:—We have a boy about 3½ years old who has colitis, according to the doctor's diagnosis. His weight is normal, and appetite generally good, but he is irritable and disinclined to play or be very active. Should he be put on a special diet? Should he have any meat? Would acidophilus milk be beneficial? Is olive oil beneficial? Should enemas be given regularly; if so, how often? Is the "J. B. L. Cascade" sold by Tyrrell's Hygienic Institute better than the ordinary fountain syringe? Should he be given "Whole Grain Wheat" as put up in cans by a company in Chicago? Is this too harsh for him in his present condition? His diet has consisted of prunes, cereals, vegetables, bread (dried or toasted), broth, but very little meat, very little potato, orange juice, olive oil, applesauce. Is Petrolagar beneficial? We have been giving this for some time. C. E. W., Pennsylvania.

Answer.—It is not possible to answer the questions other than in a general manner as they are specific in nature and their answers must be governed by the specific requirements of the patient.

Colitis is a general term and refers to an inflammation of the colon. This may be acute or chronic, and the causes are several. In general, a child with colitis should be placed on a special diet. Foods containing much indigestible residue (animal raisers call this "roughage") are usually irritating to the inflamed colon. The diet in detail must depend on the nature of the inflammation and the child's condition. This can only be determined by your physician.

Acidophilus milk is frequently used to advantage in both the acute and chronic types of colitis. The articles of diet mentioned form the basis of the diet in the usual case of chronic colitis.

In chronic colitis, oil enemata given at night are of value, as is the use of mineral oil, in bringing about a daily evacuation of the bowels. Petrolagar is composed largely of mineral oil.

Water or salt water enemata are useful in irrigating and cleansing the rectum and lower colon. Their continued use may be detrimental so that it is often advisable to dispense with them for a period of days. The ordinary fountain syringe is effectual but the use of a soft rubber catheter in place of the hard-rubber tip permits higher and more efficient irrigation.

The "J. B. L. Cascade" is less efficient and more dangerous than the ordinary fountain syringe.

CURRENT HEALTH ITEMS

WHAT TO DO WITH A MILLION

Would you know what to do if you had a million dollars to give away?

That is the question put by *Better Times*, the welfare magazine published by New York social agencies, in its November issue. It is answered by Homer Folks, secretary of the New York State Charities Aid Association, and one of the leading social workers in the country.

Homer Folks would give his million, or his five or ten millions, if he had it to dispose of, to child health.

"I would not tie them to any one phase of child health and emphatically not to any one agency or method," Mr. Folks asserts. "I would create a small board—a Child Health Foundation—including a few technical experts, an administrator or two, and one or two all-around public spirited citizens with experience in social work.

"I would instruct these trustees not to establish, except as a last resort, any new operating agencies. As soon as the success of any particular activity became demonstrated and as it came to be understood and accepted by the community as a necessary community enterprise, I would expect the trustees to arrange for a gradual withdrawal of their financial support of this activity and to inquire, through competent channels, as to the next most needed activity in child health work and to follow a similar series of steps in securing its adoption by public authority or private agency."

Mr. Folks would instruct his trustees not to put much money in buildings. Most people like to put their money in things they can see and things that have a look of permanence and stability, he says. Only a few foresee that social traditions, governmental agencies and even popular attitude and tradition, may be more lasting, for good or ill, than visible structures.

LOW BIRTH RATE IN GERMANY

Although Germany was among the countries showing the greatest increase in the number of marriages after the war, since 1921 its birth rate has steadily declined until, with England, it has reached the minimum of European birth rates.

Comment on the low German birth rate is made by the Berlin correspondent of *The Journal* of the American Medical Association in a recent issue. The decrease began in the cities. The scarcity of dwellings, the decline of the mark and the increased cost of living naturally exerted an entirely different psychologic effect on the consuming city population than on the producing rural population. It was some time later that the rural birth rate began to decline and even now the decreased birth rate in country districts is not nearly so marked as in the cities.

This is not in line with the situation in England, *The Journal* points out. There the birth rate in cities and provinces has declined uniformly. Economic crises and unemployment seems to have damaged cities and rural regions alike. The continued fall of the infant death rate in England also has an influence on keeping down the birth rate; there has been no such decline in the child mortality rate of Germany.

As for Germany, *The Journal* correspondent declares, during the year 1923 the birth rate dropped so low that it was not only lower than the death rate but even lower than the marriage rate. Such unnatural conditions last only so long as their causes continue to operate, so that with the improvement of the German economic situation the birth rate will rise again.

SEX FACTOR IN CHARACTER TRAINING

Dr. M. J. Exner, director of the department of educational activities of the American Social Hygiene Association, advises parents on sex-character training in an article in the *Journal of Social Hygiene* for October.

Normal children have a natural, active interest in matters of sex and reproduction, says Dr. Exner, and it is the parents' privilege to satisfy the child's mind by frank, truthful, wisely graded information clothed in an atmosphere of wholesomeness and respect and thereby to establish a safeguarding bond of confidence between child and parent.

Children also have a natural keen interest in the human body and in the physical makeup of the opposite sex and of adults. These are natural, wholesome interests and should be handled as such. Unabashed mingling in the nude in wholesome ways within the family circle, accompanied by appropriate teaching, is the effective method, Dr. Exner believes.

Early sex impressions and information often come in distinctly unwholesome ways, tending precociously to stimulate rather than to allay curiosity, and to warp character. This information must be forestalled and robbed of its influence by sound teaching in a wholesome atmosphere.

It is not yet sufficiently appreciated, Dr. Exner says, that the sex instinct expresses itself in large measure as a play instinct and that the sex-play impulse of children is as innocent as the sex-play impulses of puppies, but it has its dangers and must be wisely directed.

The primary responsibility for sex education of children rests on the parents, and the schools must supplement and build upon their work.

PREVENTING SIMPLE GOITER

Simple goiter most commonly develops during the period before birth, during adolescence and during pregnancy. Any plan of prevention, therefore, which controls thyroid overgrowth during these three periods will practically eliminate simple goiter.

Dr. David Marine of the College of Physicians and Surgeons, Columbia University, discusses goiter prevention in the November *Woman's World*.

"Undoubtedly, the best method of giving these traces of iodin necessary for goiter prevention is the use of a salt containing .02 to .05 per cent. of iodin," Dr. Marine declares. "The statewide use of such a salt, both for cooking and table use, would protect all the inhabitants. The exclusive use of sea salt would likewise supply sufficient iodin.

Iodized salt is now being used in Switzerland and Italy. In this country, Dr. Marine believes that it will be many years before iodized salt can be universally used in goiter districts. When the use of iodized salt becomes general it will provide practically complete protection for an additional expense of not more than 5 or 10 cents a year.